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ABSTRACT

The purposes of this longitudinal study of early intervention with 83 black mother-child dyads were (a) to test the thesis that sociocultural transmission influences childhood development in educationally significant ways, and (b) to describe the process through which such transmission can occur. Two social intervention programs were contrasted; the Levenstein Toy Demonstration Program (TD), and the Auerbach-Badger Discussion Group Program (DG). While the TD program promotes children's cognitive development by encouraging verbal interaction between mothers and their children, the DG program emphasizes the mother as a primary participant by providing her with information concerning child rearing, home and family life, and "personhood." Subjects for this study were randomly selected from three lower income housing project sites in the Chicago area. Fifty-six of the subject dyads participated in either the TD or the DG programs. The remainder served as a control group. All mothers were interviewed at the beginning and end of the study and their interaction with their children was observed and recorded. Children's cognitive development was measured when they were 21 and 41 months old. Among the results, the DG mothers were significantly superior on the Loevinger Scale of Ego Development, on a measure of Expressed Social Values, and on observational measures of maternal teaching style. Children in the TD program were superior to control children on the McCarthy Verbal Subscale at the time of final testing. Additionally, during play, discussion, but not demonstration, children verbalized more often. A coding manual for selected maternal interview data and item stems from the Loevinger Sentence Completion Test coded for the present study are among the materials appended. (Author/MP)

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Early Intervention, Maternal Development and Children's Play

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Abstract

This is a two year study of early intervention with lower income, black mothers and their young (ages 18-44 months) children which attempts to consider the social and cultural experiences they bring to early childhood intervention contexts. A primary goal of the study is to contrast two, relatively sophisticated, models of social intervention, the Levenstein Toy Demonstration Program, and the Auerbach-Badger Discussion Group Program. Another important goal is to describe how the interventions impacted participants, from their own perspective, using an interpretive model which capitalizes on their sociocultural traditions. In addition, since many of the participating mothers head single parent families, some policy implications are drawn. It is assumed that such social programs are, in fact, needed by lower income communities, but that to be accepted such programs must be (a) implemented in socially and culturally respectful ways, and (b) acknowledged as no long-range substitutes for the parallel institutional changes which must, if individual development and behavioral change are to be supported, also occur.

The basic sample of 83 black mother-child dyads was randomly recruited from three different lower income housing project sites in the Chicago area. Children averaged 22 months at the first child testing, and 41 months at the third and final testing. Children were evaluated and mothers and children observed in a standard situation in their communities so that comparability for the three study groups, one of which was a control group, could be established. Mothers were interviewed in their homes.

Discussion group mothers are significantly superior to controls on the Loevinger Scale of Ego Development, a measure of Expressed Social Values, and observational measures of maternal teaching style. They interact more with their children. Specifically, they are more likely to expand upon the chil-

dren's ongoing play. Mothers in both program groups are superior to controls at the end of the first, but not the second, program year on a measure of openness and flexibility relative to childrearing attitudes and practices.

Demonstration group children are specifically superior to controls on the McCarthy Verbal Subscale at the final testing. During play, Discussion, but not Demonstration, children verbalize more often. Differences between program and control groups at the final testing are obtained because the former demonstrate an average IQ score on the McCarthy, while the latter's score more typically reflects the average for their social status/racial position on this instrument.

The Discussion group, as the more culturally consonant intervention, essentially relies upon the extended family concept: mothers share their common experiences with their similar aged children, families, and communities, in that order of emergent priority. Group members are substitute family members to each other. Thus, the modality of this form of social intervention, and related experiences generated, are especially consonant with mothers' own preferred life styles.

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Early Intervention, Maternal Development and Children's Play

Introduction

The purposes of this longitudinal study were (a) to test, through an experimental intervention strategy, the thesis that sociocultural transmission as mediated by maternal attitudes and behaviors influences childhood development in educationally significant ways, and (b) to describe the process through which such transmission can occur by contrasting the more usual course of development, with those induced by parent intervention programs.

Conversely, it was not an objective of this study to demonstrate that the early home environment is the primary, or even major, factor in children's academic achievements upon entry and participation in traditional schools. This study does not address the question of children's educability. This is a report of a study of induced change in the mother's instructional role vis-a-vis her young child to better ascertain how social environments may produce divergencies in early childhood development along criteria which are educationally significant. Social status and race have been controlled so that the other process variables could be studied in depth over a two year time period, the age period in which, typically, social status differences in average IQ performance emerge between children of higher and lower status backgrounds (Golden & Birns, 1976): ages 1 1/2 to 3 1/2 years. During this age period differences favoring higher status children and white children become evident.

Background

The relationship between the informal, instructional role of parents and children's cognitive and academic achievements has been suggested by many studies, and there is no merit to an exhaustive review. Among others, Freeberg and Payne (1967), Hess (1970), Deutsch (1973), Leichter (1974), and Rutter (1979) have conducted reviews of this literature from the perspective of early development. Walberg and Marjoribanks (1976) and Marjoribanks (1979) have published reviews from an educational perspective, typically focusing on elementary and junior high school students. Of special interest to this work are several observational studies, four of which were longitudinal and, essentially, correlational.

The early observational studies of Baumrind, Brophy, Hess and Shipman and White and Watts (Carew) are notable. Each focused upon some aspect of early academic competence. White and Watts published longitudinal data.

Baumrind (1967, 1971) and White and Watts (1973) combined naturalistic observations of white preschoolers with home observational study of styles of parenting, particularly maternal styles. Baumrind found parents of children judged to be more socially and intellectually competent in the nursery setting to differ in their control strategies from parents of children judged less competent. Parents of competent children were nurturant, but firm and consistent in their demands (authoritative). They were neither overly permissive nor overly restrictive. White and Watts had similar findings: the younger siblings of children who were observed to be more or less socially and intellectually competent in primary school were studied. Important differences in their home environments were found. The mothers of more competent children expanded upon their younger sibs routine play activities and were better able, through this informal structuring and organizing, to control the child's behaviors and resultant quality of intellectual experiences.

Hess and Shipman (1965, 1967) and Brophy (1970) studied 163 black mother-child dyads of varying socioeconomic status levels in a simulated teaching situation. They also found that children who learned the concept sorting tasks presented (and, typically, had higher Binet IQ's) had mothers who, while teaching, controlled the child's behavior differently than mothers whose children did not learn. Effective teachers were least likely to assert authority through implicit or explicit age/status criteria (status-normative teaching style). Rather, they controlled their children's behaviors through reasoning and/or appeals oriented toward the children's own self interests (personal subjective teaching style). These mothers had higher ratios of positive to negative verbal reinforcements, more motivating or encouraging statements to the children, and sought verbal, rather than physical, feedback from the children. Brophy studied the structure of maternal teaching behavior over time during the teaching task. He found orienting and preresponse instructions to differ most between effective and ineffective teachers; conversely few differences between the two groups were observed after the child had placed the first blocks.

Both Carew (1975) and Clarke-Stewart (1973) conducted extensive home observations, Carew of white middle and working-class children (N=23 dyads), and Clarke-Stewart of black and white working-class children (N=36 dyads). Carew studied children between ages 12-36 months, while Clarke-Stewart studied children between ages 9-18 months. She extended the earlier White and Watts research.

Carew reports that amount of early joint reciprocal interaction (prior to 30 months) between mother and child correlated .76 with the child's Binet performance at 36 months. Furthermore, the child's solitary play activities prior to 30 months did not contribute to Binet scores. In the home setting, this early interaction accounted for only a very small percentage of observed time (observations were conducted during the normal 9 a.m. - 5 p.m. day), about 5% by comparison to 2% for lower I.Q. children at 12-15 months (Bayley Scales), and 13% by comparison to 7% at 30-33 months.

Carew noted that the quality of solitary play of the higher I.Q. children was distinctly better, as judged from observational data, than that of the lower I.Q. children by 30-33 months, but not before. The early maternal style is described by her as participatory, not merely supportive or facilitative. Mothers of later higher I.Q. children literally created the intellectual content of their children's play activities by guiding, expanding, and entertaining them in the process.

Clarke-Stewart's findings lend support to the above findings, even though the research strategy differed. Observers coded an array of discrete behaviors, rather than predetermined behavioral categories as in the Carew study. These data were then factored. A correlation of .67 between the first maternal and child factors, Optimal Care and Infant Competence, was found. Specifically, a mother who was judged warm, contingently responsive, stimulating and enriching from both visual and verbal perspectives in relation to the infant appeared to produce an intellectually competent, secure child as judged from behaviors within and without the home environment. The best single predictor of the child's overall competence score was the amount of maternal verbal stimulation, not necessarily, however, the verbalizations involved in direct response to childhood vocalizations. Notably, whereas maternal behaviors appeared to determine childhood cognitive competencies, childhood social behaviors appeared to determine whether mother and child in this age period initially engaged in reciprocal interactions.

Clarke-Stewart found racial differences to be greater than sex differences. Differences were observed on four of six maternal factors. Ratings of black mothers on Factor I, Optimal Care, were lower than white mothers, as well as on Factors V and VI (Intellectuality and Restrictiveness). Ratings were higher for black than white mothers on Factor II Effectiveness (at eliciting desired behaviors). Factor II related negatively to Factor I, Infant Competence; Factor VI related negatively to Factor II, Infant Object Orientation; Factor II related positively to Factor IV Infant Physical Attachment, and netatively to Factor V Infant Irritability.

Clarke-Stewart concluded that the role of intervention research ought to be attempted experimental manipulation of maternal interactive styles so as to determine conclusively whether changes in parental behavior effects changes in child behavior:

> The conclusion that maternal behavior influences children's development is based on statistical analysis of correlations across time. Although this type of analysis is a neat utilization of observational data, it does not permit the same degree of confidence in a causal relation as does deliberate experimental manipulation. A sound approach, integrating basic and applied research, would be the application of conclusions based on observational studies to programs of experimental intervention. For example, variables suggested by naturalistic observation to benefit children's development could serve as bases for educational curricula, and naturally occurring child behaviors could be used as criteria of evaluation (p. 94).

The third study is actually a series of studies reported by Bradley, Caldwell, and Elardo (Bradley & Caldwell, 1976a, 1976b, 1977; Elardo, Bradley, & Caldwell, 1975, 1977). These studies report longitudinal data using the Caldwell HOME (Home Observation for Measurement of the Environment) Inventory and several psychometric tests, including the Bayley Mental Scale, the Binet, and the Illinois Tests of Psycholinguistic Abilities (ITPA). Infants ranged from ages 6-54 months.

Essentially, these researchers present data which indicate that sensitive measures of the infant's early home learning environment predict significantly better to scores on the Binet at 36 months than socioeconomic status indices (e.g., maternal and paternal years of education, occupation of household head), or the Bayley at 6 and 12 months. The environmental measures also predict to ITPA scores at 37 months. Some of the studies examined black-white differences.

The investigators found that, while HOME at 24 months predicts better to Binet IQ at 36 months for whites (multiple r=.62 (N=37)), by comparison to blacks (multiple r=.58 (N=68)), increments in the multiple r obtained by using HOME in contrast to status indices alone, were greatest for blacks. The authors also found that HOME at 6 and 24 months was more useful for predicting ITPA scores at 37 months of whites than blacks.

Similar factors on the HOME scale were found to be useful predictors to the ITPA scores for both black and white children: (a) Emotional and verbal responsitivity of the mother; (b) Provision of appropriate play materials, and (c) Opportunity for variety in daily routine. Two factors were useful only for whites: (d) Organization of physical and temporal environment, and (e) Maternal involvement with child. A final Home factor, (f) Avoidance of restriction and punishment, was not useful for either group.

Since scores on the HOME Inventory are based upon evaluation of both home observations and parental report, the authors conclude that such environmental process measures of early opportunities for learning and development are likely to be more useful than traditional static indices of individual or global social traits. These authors also suggest the importance of experimental manipulation as one way to clarify causal linkages:

> In this study, as in the case with other correlational studies, several different hypotheses may be considered as plausible explanation of the results obtained: (a) a stimulating environment produces a bright child; (b) a bright child causes those in the environment to react in a more stimulating fashion, (c) some third factor affects both the child and the child's environment, and (d) various types of children interact differently with certain types of environments. Experimental investigation...must be conducted to determine which of the four is most plausible (pp. 75-76).

Bronfenbrenner (1974) and Goodson and Hess (1976) have reviewed evaluations of parent education programs which have used one or more, but not all, of the strategies included in our approach to research and evaluation. Both sets of reviewers concluded that the literature to date suggested that home-based, moderately structured parent programs produced the most striking short and long term gains for children, using intelligence and achievement test performances as criteria of effectiveness. Goodson and Hess noted that neither curriculum content per se, nor degree of specificity in tutoring the parent, usually the mother, were related to these gains. They suggested that such programs may positively impact parental attitudes and parent-child interaction. Notably, some parents seemed to have a greater sense of control over their own lives and more flexible attitudes toward the child's development; these parents used a more elaborated language style, and were judged to be more involved and responsive in interactions with their children.

When this study began in 1974 few researchers had used observational methods to examine the effects of a longitudinal experiment on the developmental course of parent-child interactions and children's cognitive development. Perhaps the Parent Child Development Centers (PCDC), initially established in the early 70's, were the exceptions to this rule. Even these centers did not analyze data on comparative strategies of education for parenting within the same sample populations.

The New Orleans PCDC program studied infant development and mother-child interactions in black infants from lower socioeconomic communities whose mothers were enrolled in a center-based parent group program. Evaluations of children began at age 4 months and continued through 36 months. Results on two waves of subjects were initially reported (Andrews, Blumenthal, Bache III, & Wiener, 1975). Sample sizes for both waves averaged $\underline{N}$=20.

In both waves, the researchers found that observed differences between program and serial control mothers in an unstructured interaction (waiting room situation) with their infants were evident prior to any emergent cognitive test differences in the infants. Mothers differed in the two groups by the time the infant reached 22 months in the first wave, but as early as 12 months in the other. Later results presumably reflected the experience of staff with program delivery. Changes in children lagged by about six months to one year in the later wave (Pacific Test Series at 24 months, Bayley Mental Scale at 19 months). However, no educationally significant differences were obtained at 25 or 36 months between first wave infants.

For both waves, maternal behaviors in the program and the serial control groups began to diverge along social and affective dimensions. Observers judged program mothers, using Ainsworth's (1973) observational rating categories, to be significantly more sensitive, accepting, cooperative, and responsive by the time that the child reached 22-24 months (Responsivity was not assessed in wave one). Specific ratings at 15 second intervals of amount of positive interactive maternal behaviors (e.g., giving affection, asking the child a question, general conversation, labeling, etc.) also significantly favored program mothers. The results clearly demonstrated that not maternal language per se, but the social-affective context of the language, over time differentiated program mothers from controls. Benefits to children were highly suggested, but not confirmed, by the findings. Results suggested that changes in maternal interactive styles must precede, or at least parallel, any changes in children.

Hypotheses

There were four major clusters of hypotheses in this study. The clusters predict the direction of differences between program and control group participants at the conclusion of the two year study in the following areas: (a) children's cognitive development, (b) observed maternal and child behaviors, (c) maternal childrearing attitudes, and (4) maternal personality processes. In the research, the differential effects of family structure and geographical residence on the measures of dependent variables in each of these clusters were also explored.

The one hypothesis in cluster (a) predicted that program children would be superior to control children in average level of intellectual development, and that this superiority would be because of greater verbal expressiveness, and general word fluency. This hypothesis was merely a restatement of the implicit or explicit objectives of most early childhood education programs designed to influence young children's cognitive development. The replicated parenting programs also had this objective as a criterion of effectiveness.

Observational hypotheses in cluster (b), predicted first that program mothers, by comparison to controls, would at the conclusion of the study have an interactive style more similar to mothers who were effective teachers and interactants in the Baumrind, White and Watts, Hess and Shipman, and Brophy studies. Specifically, it was predicted that their strategy for control of their children would be more personal-subjective than status-normative in overall character. Second, it was predicted that the children of program mothers would show more preference for free-choice behavior, more interest in novelty, longer attention spans, and more verbal expressiveness during play than children of control mothers. These predictions appeared consistent with the characterizations of the more competent children in the Baumrind and White and Watts studies.

Cluster (c) hypotheses predicted differences in reported childrearing attitudes and practices between program and control mothers by the conclusion of the study. Some earlier research (Slaughter, 1969) guided the focus of this aspect of the research. Ninety black mothers of lower socioeconomic backgrounds were interviewed about their childrearing attitudes and practices. Their children, who were concurrently enrolled in a summer, 1965 Chicago area Head Start program, were independently administered preschool achievement tests, including the Binet and an adaptation of the original Caldwell Preschool Achievement Inventory. Their achievement oriented behaviors during classroom activities were also rated by teachers and outside observers using an adaptation of the original Zigler Behavior Inventory (Hess, Kramer, & Slaughter, 1966). The coding scheme for the open-ended maternal interviews was developed by this researcher. Essentially, this study found that mothers rated high on (a) warmth and acceptance of the child, (b) openness to alternative strategies as far as controlling the child's behavior, and (c) sensitivity to the child's needs as a developing person, had higher achieving children in the preschool setting. Maternal individuation, as defined in this research included (b) and (c); it correlated .44 ($p < .01$) in a multiple r with children's Binet scores. Factor analysis of these and other variables, however, indicated that warmth and acceptance, which had been independently assessed, loaded first on the first factor, with (b) and (c) next in order. In the present study, the three scales were combined, using the best indicators from each one to establish a new seven point Maternal Individuation scale.

It was predicted that program mothers would be superior to controls on maternal individuation. It was also predicted that they would more often consider the child's development when offering explanations for typical child behaviors, and more often take the child's viewpoint in a presented hypothetical situation which would require maternal teaching.

Cluster (d) hypotheses addressed maternal personality processes. We predicted that, for those women whose social experiences were significantly altered (i.e. program, by comparison to control, group mothers), there would be differences in personality processes in certain directions. Specifically, program group women would have higher levels of ego development, self esteem, and be more similar in value orientations to intervenors by the conclusion of the study than control group women.

The parent educator as perceived was neither a tutor nor a trainer, but a female person able to stimulate, share, and possibly redirect, the basic competencies and resiliencies of the program mothers. Program women were expected to identify with the female intervenors and, in particular, with the process intervenors used to apprehend and utilize social resources. However, it was not known whether observation of the modeling of this process across a series of interactive sessions between that intervenor and the mother's own young child, or actual interactive experiences, independent of the child, would be most influential. There was no knowledge of how initial familial composition and geographical location would affect obtained results. The assumption was that social relationships were mediated through personality processes and thus that no changes in observed maternal or child behaviors relative to clusters (a) and (b) would occur without corresponding evidence of change in cluster (d).

Method

Description of Parent Education Programs

The research emphasized three conditions: (a) Levenstein's Toy Demonstration program, (b) Mothers Discussion group program, and (c) a control group. The Discussion group was initially conceived as a conservative control to the Toy Demonstration program.

Service delivery associated with all three conditions was implemented by United Charities of Chicago with appropriate consultation. United Charities is a 100 year old multi-purpose social agency that has historically served low income families. The two programs to be described operated out of the Family Service Division of the agency. In initiation and implementation of these programs, the agency perceived itself as moving away from principal emphasis on remedial or therapeutic approaches to families, and towards a complementary emphasis on primary prevention and development.

Toy Demonstration (TD) program.

Wargo (1971) surveyed 326 compensatory education programs to determine whether they met minimal criteria for adequate evaluation and their effectiveness in view of these criteria. Criteria included: (a) whether the population was clearly "disadvantaged," consisted of more than 30 children and was properly selected to control for motivational factors; (b) whether cognitive benefits were measured by reliable, valid instruments; (c) whether gains or differences favoring the program were statistically, and (d) educationally significant. Ten of the programs met these criteria; of the ten, the only one which focused on early intervention was the Levenstein (1970, 1971a, 1971b) *Verbal Interaction Project*. This was the first program replicated.

Briefly, this program tries to promote children's cognitive development by encouraging verbal interaction between mothers and their children through the assistance of a third person, identified as a Toy Demonstrator. In the first year of the original program Toy Demonstrators were professional social workers, but in later years volunteers and paraprofessionals participated with similar effectiveness. During that year Toy Demonstrators visited the homes of 33 mother-child dyads biweekly over a seven month school calendar year. There was an average of 32.4 visits per family, and each visit lasted about 32 minutes. Typically, at the first weekly visit, a toy or book identified as a Verbal Interaction Stimulus Material (VISM) was given to the family. The Demonstrator modeled play with the item, while mother observed . Later in this session, and in the second, review session, mother was invited to imitate this approach in play with the toy. Toys were specially selected by Levenstein for their cognitive stimulus value, safety, durability, and low anxiety potential. All Demonstrators received special training prior to participation, including emphasis on their roles, the goals and format of the program, and introduction to basic child development concepts. Training time required was less than one month.

Importantly, both mother and child are participants in this program. It is assumed that mothers will privately begin to initiate and/or sustain more of the social play experiences which occur in the Demonstrator's presence, in her absence. Rationalized in terms of its long-range applicability to successful school achievement, this program was depicted by Bronfenbrenner (1974) as one of the leading parent education programs.

This paradigm was the standard against which the Toy Demonstration program in this study was replicated. Our three black female Toy Demonstrators, as well as the coordinator of this program, went to Levenstein's home offices in June, 1974 for special training. Throughout the first year, members of Levenstein's staff provided ongoing consultation. The Demonstrators were professionally trained social workers, married, under age 35, with considerable prior experience in working with families in similar communities.

Mothers Discussion (MD) group program.

The second program was essentially created and generated by United Charities to expand its group services component. It combined elements of the approaches of Auerbach (1968, 1971) and Badger (1968, 1971, 1973) to parent education, but it also benefitted from the unique perspective of its coordinator, Simpson (1979). Auerbach's work is the context in which earlier nondirective agency group services to parents were rendered, but typically, this work did not utilize extensive outreach recruitment strategies nor contain an early childhood curriculum component. Badger's work included both of these aspects. Neither Auerbach nor Badger state a focus on the relation between the group experience and self-perception and understanding as explicitly as Simpson. In a taped presentation to program and research staff in June, 1974, three months prior to the groups' beginning, Simpson reviewed both the Auerbach and Badger models. She stated her aim was to create an awareness on the part of her staff that the groups themselves must come to be perceived by the participants as personally beneficial. Mothers had to feel they were benefiting from their groups as much as, or even more than, their children if groups were to succeed.

The typical format of Auerbach's parent education programs has been weekly meetings of 10-15 parents for a 1 to 1 1/2 hour group discussion of commonly identified concerns about childrearing for about three months. Parents share their experiences of their children, support, and learn from each other. The goals of these groups, which followed no structured curricula, were to provide educational experiences for parents which would promote independent thinking and decision-making in family life in general, and especially in regard to childrearing. Emphasis has been on the child's social and emotional development. The role of the group leader(s) was to facilitate the communication which makes this support and learning possible. Group leaders were trained in child and family development, and used this knowledge in the groups where indicated. Auerbach reports successes with a variety of socioeconomic and ethnic groups over the years, but has stated that this approach to parent education has not been adequately evaluated.

Badger (1968, 1971, 1973) reported working with a group of low income black mothers over a two year period (seven months per year). Mothers were encouraged to tutor their children at home and provided with an infant curriculum including some toys. Home visits were made for demonstration purposes. Significant differences in IQ were reported for the children of program mothers, by comparison to controls. The effects of the group experience, independent of home tutoring, were not examined.

The basic elements of Badger's program included: (a) biweekly parent group meetings, each lasting about two hours; (b) focus on early education curriculum for infant stimulation during at least one of those two hours in the context of mothers' discussions; (c) planned additional group experiences, including field trips, socials, etc., and (d) home visits by group leaders, and visits by the mothers' children to selected meetings.

In this study, meetings were held weekly, and the home visit component of Badger's format was deleted. Children played in a specially prepared adjoining room during group meetings, if mothers brought them to the sessions. No emphasis was placed upon the stimulus value of any particular toys, many of which were constructed by mothers themselves, using familiar household materials and objects. However, discussion of infant curricula materials did occur.

This program emphasized the mother, not the child, as the primary participant. Specific toys were not as essential; rather, what was essential was the mutual sharing of information and experiences of the women as to childrearing, home and family life, and personhood. It was assumed that specific interest in activities which could enhance children's development, such as play, would develop secondarily, as a result of the parent's personal needs being met through the social life of the group. Each group leader initially had two groups of about 10 mothers who met during the school calendar year for about two hours. Occasionally, this time was used for outside field trips and consultation with community and civic leaders.

During its first year, Badger provided consultation to this program. The three black female group leaders were, like the Toy Demonstrators, also professionally trained social workers. Two were married, one was single. Two were under age 35, while one was under 45. All had considerable prior experience in working with families in similar communities. Each group also had an assigned paraprofessional recorder, following Badger's format. The paraprofessionals were also black females.

Demonstrators and Discussion group leaders met weekly with their respective coordinators to share experiences and plan future efforts as a group throughout the two year study. Coordinators, agency supervisory staff, this investigator, and the research project director met monthly.

Control group.

This group received only the prescribed toys as developed in the Levenstein model on a weekly basis. No demonstrations were made, and the toys were delivered by agency paraprofessional staff.

Sample Selection

Subjects were recruited from each of three Chicago Housing Authority (CHA) housing project sites: Altgeld Gardens (site A), Robert Taylor Homes (site B), and Henry Horner Homes (site C). The population of these sites is nearly 100 percent black American, and the residents include a very high percentage of lower income and AFDC recipients. Taylor was the largest site, housing a population of about 26,335 in 1973 within 28 sixteen-story highrises (CHA estimates). Horner housed approximately 10,000 residents, and Altgeld Gardens, 9,645. CHA estimated that there were 6,825, 20,000, and 8,000 minors, respectively, at sites A, B, and C. Since 1968, the Family Service Bureau of United Charities had operated an outpost at site C, and similar outposts were established at sites A and B in 1972.

The sampling plan is formally identified as a multi-stage, stratified cluster plan. Essentially, randomization was by location or focal area, rather than by subject. Sampling followed a similar format at each site. Nine focal areas were identified within each site on corresponding maps. Focal areas were established according to degree of proximity to the base offices of the Family Service Bureau outposts and the organizational characteristics of the building units in the site (e.g., row houses at site A versus number of buildings and floors within buildings at sites B and C). Each program had three focal areas. Approximately one-third of the participants in each of the three programs were recruited by staff from each of their three respective focal areas. The specific focal areas for each program were randomly chosen. For each three focal areas similar in proximity and character, delegation to one of thre three programs depended upon the assignments of random numbers. There were assurances from CHA that the buildings did not contain any marked differences in the residents (e.g., no buildings were devoted entirely to senior citizens).

The recruitment goal was 90 experimental dyads and 45 control dyads, for a total of 135 dyads. Each social worker canvassed the buildings in her respective focal areas for potential participants in her program; TD workers also canvassed for controls. In early August, 1974 descriptive flyers were distributed throughout the sites. The flyers emphasized helping young children to prepare for future schooling. Second, during August and September, 1974, building canvassing was conducted. Each mother of a child between 18 to 24 months of age as of 10/1/74 was invited to participate, according to her focal area, in either the TD program, the MD program, or the Toys Only (control) group. Because mothers were initially offered specific programs, rather than the possibility of assignment to one of three groups, the probability of acceptance was maximized, motivation for a particular program was controlled. More participants may have continued over time as they knew what to expect.

Table 1 presents the results of the recruitment effort, using as the final sample all families whose child received the first child test evaluation prior to 2/15/75.

Insert Table 1 about here

Mothers who initially agreed, but either never participated, or participated only in the fall of 1975 and never brought the child in for the first testing. were not considered part of the main study. Sixty-one such families were identified.[1] Information as to why mothers did not follow-through was available for about 64 % (N=39) of them. Reasons were categorized and the top four ranked as follows: (a) Other family pressures (e.g., illnesses), N=10; (b) Altered program commitment (e.g., mother preferred day care), N=8; (c) Residential relocation of the family, N=8; (d) Occupation (e.g., mother returned to work), N=6.

Data in Table 1 indicate that initially there were 41, 53, and 38 participants in the TD, MD, and Control groups respectively, for a total N=132. The majority of these participants, about 85%, were selected from the appropriate focal area by field recruiters. Attrition from this sample occurred during and at the end of the first program year, rarely in the second year. Of 49 attrited participants, 26 left in 8/75 following the conclusion of year one; 13 of the 26 were Discussion group participants. The numbers of attrited cases for the TD, MD, and control groups were, respectively, 15, 27, and 5 (39.7%). Information as to why the 49 families attrited was available for about 64 % (N=31). The top four ranked reasons were as follows: (a) Residential relocation of family, N=12; (b) Education (e.g., mother returned to school), N=7; (c) Altered program commitment, N=6; (d) Other family pressures, N=3. The final base sample is 83, 26 in the TD program, 26 in the MD program, and 31 in the control group.

Sample Characteristics

The primary issue, relative to sample characteristics, is the initial equivalence of groups across treatment conditions. Table 2 presents data on this issue for (a) primary source of income, (b) occupational status of mother, (c) education of the mother, (d) family structure and composition, (e) perceived child and maternal health status, and (f) maternal and child age. The data in Table 2 were obtained from an interview administered to participating mothers near the end of the first program year. These variables were examined because they pertain to the socioeconomic status of the family, the structural constraints on the family's life style, the physical health and developmental (crudely indexed by chronological age) status of the participants in this, essentially sociopsychological, study of behavioral change.

Insert Table 2 about here

Table 2 indicates that AFDC is the primary source of income for all recruited groups at all sites. In addition, from 50-100% of the mothers report no secondary source of income, again across all groups and sites. Similarly, 85% or better of the mothers across all groups and sites report no current work. From 20-43% report never having worked; of the 60-80% who have worked, about 24-36% held full time jobs.

There is some site variation in amount of work experience. Participants at sites B and C are more likely to have had full time work experience ($X^2(2) = 8.036$, $p < .02$) than those at site A. There are no significant site differences in the proportions of participants having some prior work. No study groups varied significantly in amount of prior work experience, whether full time or not. Further, the average number of years of education, is quite comparable across all groups and sites.

An analysis of family composition suggests how life styles in the three program groups may be similar and different. The modal household size is six to seven persons. The three study groups are quite comparable in household size. Site C has the largest average number of persons, site A the smallest. Site C also has the largest average number of children per household ($\underline{M}$=4.3), and site A the smallest ($\underline{M}$=2.3). Generally, however, the groups are comparable on this variable, as well as the child's typical birth order. Finally, though there is variability between sites within groups, the majority of children within each group (65-73%), as well as within each site (55-90%), had not been separated more than one week from their mothers prior to this study.

There are some differences across groups in children's access to adult (over age 16) males. Using Billingsley's (1968) categories, significantly more control children live in attenuated extended families ($\underline{X}^2(2) = 11.446$, $\underline{p} < .01$). TD children, as a group, are significantly more likely to sustain contact with their natural fathers than either MD or control children ($\underline{X}^2(2) = 16.216$, $\underline{p} < .01$), but fathers of children in both program groups are more likely to live with them by comparison to fathers of control children ($\underline{X}^2(2) = 7.154$, $\underline{p} < .05$). Mothers of control children, in particular, are more likely than either of the other groups to report that the significant male in the child's life is not the child's natural father, and does not live in the child's home ($\underline{X}^2(2) = 8.851$, $\underline{p} < .02$).

The overwhelming majority of mothers across all groups and sites report that the children do have at least one significant adult male available to them. Furthermore, other apparent trends (see Table 2) toward group differences in family structure and composition do not reach statistical significance.

Mothers rated their own perceived health on a three point scale which ranged from excellent to average or below average. Most perceived themselves as average. The child's perceived general health was evaluated on a 0-9 point scale in which one point was given if the child had to see a physician more than three times in the previous year, two if he or she had been hospitalized prior to 9/73, and three if hospitalized between 10/73 and 6/75. One point each was given if the child's mother reported difficulty with seeing, hearing, or that his or her general health was below average. The maximum score was 9, indicating very poor health. Children across all groups averaged a score of 2, indicating excellent physical health, as reported by mothers. More importantly, the three groups are comparable on this variable.

Finally, the average ages of both children and mothers are comparable across all groups and sites. The child's age is given in months as of 10/15/74 when programs began. The mother's age in years was obtained at the end of the first program year during the maternal interview.

In summary, the three groups, TD, MD, and control are equivalent on many variables of relevance to data to be reported with one important exception: family structure. Participation in one or another group is partly a function of the dyad's household family structure, but not size. Observed site differences generally appear to hold for all groups within a site, such that overall group differences are minimized.

Twenty-six of the mothers who left the study were interviewed, or about 53% of the attrited sample (N=49). Demographic data were available for 8 TD, 15 MD, and 3 control attrited group participants. Each group was contrasted with the corresponding main study group from which it withdrew on the 26 variables listed in Table 2.

TD's who left had significantly more participants from attenuated nuclear families ($X^2(1)=5.893$, $p<.02$), by comparison to those who stayed. MD's who left were more likely to report that no adult male lived in the child's household ($X^2(1)=4.087$, $p<.05$) than MD's who stayed. The three control participants who left reported a nonsignificant trend toward lower average child birth order (M=1.67, SD=3.61), and a somewhat younger average maternal age (M=22.0, SD=3.61), than any groups of participants who stayed. Conversely, there was a trend for TD's who left to be somewhat older than any study groups who stayed (M=29.0, SD=6.50). No other differences were evident.

The social background data suggest that the differential rates of attrition among the three study groups typically did not result in selective patterns of attrition. There is some evidence that TD mothers who left were more likely to be the sole heads of their households than those who stayed. Possibly, this program variant had less appeal to such women. Further, more mature (as crudely indexed by chronological age) TD mothers may have withdrawn, as well as less mature Control mothers. Finally, though no significant differences in percentages of attenuated nuclear or extended families were obtained, MD women and children who left may have been even more isolated from any adult male presence in their households than those who stayed.

The groups who stayed probably were socially not as sharply distinct from one another as they might, but for attrition, otherwise have been.

Variables and Measures

Table 3 summarizes the major variables in this study, including the method of measurement, the frequency with which these measures were obtained, the actual dates of data collection, the location of data collection, and the predicted standing of the three groups on these variables at the conclusion of the study. The general assumption was that, at the initial assessment towards the beginning of the study, the three groups would be equivalent on these variables, but that over time, the program groups would begin to differ significantly from controls on measures of them. In the following discussion, each variable will be operationally defined, and measures, including evidence of reliability and validity, described. Examples of scoring will be provided only where especially pertinent. More elaborate descriptions of the assessment techniques are available in other published documents (Slaughter, 1978, 1979) submitted to the grantee agencies. Procedures for data collection and analyses will be discussed after the ensuing description of variables and measures.

Intellectual development of the child.

Children's intellectual development was assessed using three standard psychometric measures of intelligence: the Cattell Infant Scale, the Peabody Picture Vocabulary Test (PPVT), and the McCarthy Scales of Mental Abilities. The Cattell and the Peabody were selected because these tests were used by Levenstein in her original research. When age limitations prevented continued use of the Cattell at the third testing, this sequence was continued with the McCarthy. The McCarthy provides a more differentiated profile of children's abilities than the Binet, for example, and it's relatively recent standardization included black and white children of diverse socioeconomic strata. At this time, the results of traditional psychometric measures of intelligence have more direct educational import than other, comparable measures of intellectual functioning.

Harms and Spiker (1959) have reported Cattell test-retest reliability coefficients which range from .82 to .93 under a variety of test conditions in a similar aged white population. Children in our sample who received the complete Cattell 1,2, McCarthy sequence (N=57) averaged, at the first Cattell administration, 22.8, 22.6, and 22.4 months, respectively, in the TD, MD, and Control groups. At the second and final Cattell administration, scheduled at least six months later for all children, children (N=57) averaged 31.8, 31.9, and 31.7 months in the TD, MD, and control groups.

Golden and Birns (1968) have reported normative data on the Cattell for black infants of similar ages and socioeconomic backgrounds. At 24 months, children of families on welfare in New York city (N=20) had a mean IQ of 98.5. In a follow-up study, Birns and Golden (1972) reported a correlation of .60 between the 24-month Cattell and the Binet at 36 months for the total sample (N=89), which included black infants from diverse socioeconomic strata. In this sample, correlations of .50 (N=74, $p < .01$) and .39 (N=73, $p < .01$) between Cattell 1 and PPVT 1, and Cattell 2 and PPVT 2, respectively were obtained. Correlations of .27 (N=64, $p < .05$) and .45 (N=57, $p < .01$) between Cattell 1 and 2 and the McCarthy GCI (total IQ score) were obtained.

The PPVT was normed on 4,012 white children from Nashville, ages 30 months to 18 years in 1958. Alternate form reliabilities reported for ages 2-6, 3-0, 3-6, and 4-0 years were .72, .77, .81, and .75 respectively. Validity correlations with the Binet, using raw mental age scores, were reported to be between .60 and .87, with a median r of .71 (Dunn, 1965). The PPVT is widely used in intervention research and is considered to be primarily a measure of receptive language skills.

The ages of the children who received the complete Peabody sequence 1,2,3 (N=55) at the first test were 23.0, 22.7, and 22.2, respectively, in the TD, MD, and Control groups. As a result, testers could not always set basals. Instead of setting a basal (8 consecutive correct responses), they discontinued the test whenever the child reached a ceiling (6 errors in 8 consecutive responses) and used the resultant raw score (ceiling less errors) as the basis for further calculations. Children in the TD, MD, and Control groups averaged 31.8, 31.9, and 31.8 at the second testing, 40.7, 41.4, and 40.8 months at the third and final testing.

The McCarthy Scales of Mental Abilities offer information as to a General Cognitive Index (GCI) or IQ score, as well as standardized information on the differential abilities of children, ages 2 1/2 to 8 1/2 years. The five subscales of the test are: Verbal, Quantitative, Perceptual-Performance, Memory, and Motor Development. Split-half reliabilities ranged from .91 to .96 in the ages from 2 1/2 to 4 1/2 years on the GCI in the 1972 standardization sample which included 16% [redacted]ite children from varied social class and geographical backgrounds. Stability correlations for the five subtests and the GCI over a three to five week interval ranged from .71 to .91 in a sample of 3 1/2 year olds (N=40). On a subsample of 35 Northern white urban children, ages 6 to 6 1/2 years, McCarthy found that GCI scores correlated .71 with the WPPSI IQ and .81 with the Binet. Thirty-one of these children subsequently received the Metropolitan Achievement Tests. The predictive validity correlations with the GCI were .44 for Reading (Word Knowledge and Readings subtests), and .54 for mathematics.

Kaufman and Kaufman (1973, 1975) report no significant racial differences in average IQ or the five subscale scores on this test. However, they have found significant social status differences. For black children of semi-skilled and unskilled workers, ages 3.0 to 7.7 years, the average IQs are, respectively, 88.2 (N=62) and 89.9 (N=27).

In this study, the scales were administered only at the third testing. The average ages of the children in the TD, MD, and control groups (N=57) were, respectively, 40.7, 41.4, and 40.8.

Personal subjective maternal teaching style.

Earlier studies (Hess and Shipman, 1965, 1967; Brophy, 1970) which established the concept of the personal-subjective teaching style were conducted with preschoolers, average age four. Emphasis was upon the nature of motivating appeals and the qualitative structuring of experience, via language, used by mothers in efforts to teach a new concept to the children in a task context which could be assumed new and inherently without meaning to them. Such didactic teaching is less likely to occur with younger children, though clearly, there are many opportunities for parents to give new and novel meanings to the children's ongoing experiences. The study assumed the child's exploration and play with initially unfamiliar objects (toys) would be one such context. To the extent that mothers facilitate the ongoing play of their children, they in effect teach them about the meanings of their experiences. The notion of personal subjective teaching style was operationalized by delineating specific observational variables and making specific predictions about how effective maternal teaching would vary along each of these identified dimensions. That is, a model of effective maternal teaching during the ages in question was developed.

Effective teachers would, by definition, more often be observed to be involved (interacting) with their children, less often observed to have total uninvolvement--not even looking at the child (no theme). They would specifically show and/or tell (instruct), expand or elaborate upon, or at least support or facilitate, the child's play. They would less often stop or restrain (restrict) the child during play or deflect the child's attention elsewhere (redirect). Because the children were young, no specific predictions were made as to whether such mothers would orient their children to play activities by enticing (suggesting) or specifically leading (directing) them into such experiences. Possibly, at the conclusion of the study, such motivational strategies would be less often needed, and therefore less often used, by program than control mothers.

The general approach to the observational phase of the study was somewhat unique. In the absence of normative observational data on this population, the observational system was developed after the first data collection, using only the videotapes of 26 attrited dyads for this purpose. When the system was developed, and inter-observer agreements established, it was applied to the main study sample. Every videotape was coded for 108 10 second intervals (18 minutes), using operational variables 2a to 2i as listed in Table 3. Variables 2a to 2g are mutually exclusive: if category 2a, for example, is chosen for any given 10-second interval, it is not possible to simultaneously choose categories 2b-2g. Categories 2h and 2i are also, by definition, mutually exclusive, as are categories 2a-g and 2i. Using these categories, observers assessed the predominant character of the maternal verbal and nonverbal behaviors at any given interval, and rated it accordingly. The first two minutes and the last four were deleted form the original 24 minute play session so as to maximize comparability of data across records.

Observer agreements for rated categories were established on six randomly chosen attrited cases which were completely coded by independent judges. The results of each case were evaluated against the standard set by this researcher.

In each instance, the category chosen at each 10 second interval was contrasted with the standard for that interval or, if in disagreement, with the interval immediately following. If any particular coded interval was in agreement with the standard of either that interval or the one immediately following, it was judged correct. This procedure attempted to control for observer differences in timing and recording of their codes and focus directly upon the extent to which observers essentially agreed upon what they saw.

Percentage agreements on whether or not the mother was interacting with the child at any given interval for the six cases ranged from .91 to 1.00 for one judge (M=96.5), and .94 to 1.00 for the other (M=97.7). Agreements on the character of the involvement ranged from .70 to .97 for one judge (M=89.0) and .76 to .98 for the other (M=88.3).

Child play behavior.

Both Levenstein's original TD program, and Badger's early Discussion group program, perceived informal play with infants by parents to be essential to the young child's language and concept acquisition. The TD program, in particular, utilizes play as the medium of early intervention. Bruner (1973) has argued that through play the child masters and further develops and perfects skills previously spontaneously released through self-encounters in the environment or observed in others' behaviors. He also believes that the inherent intentional thrust of the child toward competence is most clearly evident in play behavioral repertoires.

Describing Schoggen's 1971 research findings, Bruner notes that the children from middle-class homes, by comparison to lower-class homes were, through a variety of adult techniques, more often mobilized into organized independent actions. Children from the lower-class homes, in contrast, experienced more techniques in which their ongoing actions were restricted or redirected, and in which physical, rather than verbal mediums of communication were used. For him, the important point is that the lower status home environment may not be supportive of the child's sequential acquisition, and practice of, the constituent acts which he believes to bases for learning and development of future behavioral repertoires.

In initial analyses of the children's play behaviors, focus was on (a) whether or not the child is engaged in play, (b) the structure or evident complexity of the play, and (c) the amount of child speech during the play. Although this is a relatively gross analysis, little empirical research in this population, or for that matter, other populations, had been conducted.

Even less is known about the role of adult or peer input into the child's play behavior. Garvey's (1977) recent book, for example, devotes the last brief chapter to "learning to play." She believes that play emerges spontaneously if the very young child receives appropriate human experiences in nonliteral treatment of basic (human and nonhuman) resources. In her first chapter she states:

> The origins of most of the aspects of play can be detected...in the earliest contacts of the child with his parents or caregivers. Although new ways of playing may be learned gradually and in other contexts, a nonliteral orientation to experiences is probably communicated to an infant in the first month of life. (p. 8)

El'Konin (1966) suggests that the adult input into the development of play behavior is primarily in the form of the introduction of the conventional usages for newly identified objects. Such usages are introduced in contexts in which there are joint reciprocal activities between adult and child. Others, such as Vygotsky (cf. Schwartzman, 1976) have stated that early object play may in part take the form of idiosyncratic representation of adults' prior and present activities with these same objects. Adults provide the base upon which subsequent generalizations or transfers may occur. However, these generalizations will always assume the characteristic style and structure appropriate to the child's existing cognitive capacity.. Children reproduce neither the activity nor the object or prior interest in their play, but the relationship between adults and children in the context of the objects and the specific activities.

This study independently characterized maternal and child behaviors. Children of mothers who are totally uninvolved with them may actively play for long time periods, verbalizing and putting two or more objects (e.g., blocks) together. Similarly, mothers may be observed to be supportive of an upset or unhappy child who is decidedly not playing. The focus is on the social environment (=average frequency of certain maternal behaviors) in which certain child behaviors that are thought to be of developmental significance regularly occur. Greater expenditures of time relative to child variables 3-6, for example, have often been posited to be part of the behavioral repertoires of more competent young children.

Free-choice behavior: this variable was operationally defined in terms of two categories of evident play structure: (a) the amount of time the child clearly imitated (modeled) adult activities with specific toys in the experimental setting (telephone, doll, for example), designated Imitation, or (b) the amount of time the child clearly modeled adult, other physical objects, or scenarios not currently present in the setting, designated Representation. Both activities could be either spontaneous or encouraged by mother, but the child had to demonstrate obvious pleasure in them.

Interest in novelty: this variable was operationally defined as the amount of time that the child's behaviors seemed exploratory or investigative relative to single objects or toys in the setting (Object Uses). Apparent interest in how a toy moved, or what sound it could make, for example, were classified here. Speech behaviors recorded as Verbal included: babbling, singing, inaudible stringing together of words, laughter, cries, screams, strong one to two word utterances, audible sentences, etc. Behaviors recorded as Nonverbal, aside from silence, included: grunts, pants, and other brief utterances associated with body movements.

Attention span: this variable was operationalized as the amount of time in which the child was clearly shifting the focus of attention (Transition). Possibly he or she looked around for something else to do, perhaps moved away from, or towards, some object. Affect, in such instances was typically neutral. In this observational system, the more time thus expended, the lower the attention span.

Verbal expressiveness: the amount of time the child was judged to be Verbal during play with (a) single or (b) two or more physical objects. This definition does not include the object of the child's speech, the quality or coherance of speech, just its sheer expression.

Grouping: this variable was not part of the formulations of other researchers who have identified competencies in young children. Data on attrited tapes and the writings of authors who have specifically studied children's object play (Sinclair, 1970), suggested it would be important to distinguish between play with single objects, and play characterized by the child's intensive efforts to discover or express the relationships between two or more objects, whether or not these relationships are portrayed in conventional adult terms. This latter was termed Grouping. Grouping, of course, may or may not be accompanied by child speech.

Non-Play: two classes of instances in which children clearly were not playing were observed. Either they primarily sought physical contact and comfort from mother, or they appeared sleepy, impassive, bored, and/or immobile for more than 30 continuous seconds (To this point, such behaviors usually were part of Transitional activities). The former was coded Social Contact, the latter Discrepant. Flashes of temper, and when they occurred, prolonged whining and crying were also coded Discrepant.

Observer agreements on the child play behaviors were calculated exactly like agreements on maternal behaviors. Percentage agreements ranged from .78 to .95 for the first judge, (M=84.0), .62 to .92 for the second (M=79.0), and .79 to .91 for the third (M=83.0). Complete data at times 1, 2 were available for 68 dyads. The average ages of observed children in the TD, MD, and Control groups at time 1 were 26.8, 25.7, and 28.0 months, respectively; at time 2 they were 39.2, 39.6, and 39.3 months.

Maternal childrearing attitudes and practices.

The primary purpose of the focused maternal interview on childreating attitudes and practices was to obtain information about the mother's perception of her role as teacher of her child, as contrasted with simply the role of nurturer or caregiver. Since the teaching of young children is typically informal, the social-affective aspects of teaching may be even more critical than in formal, didactic settings. The concept maternal individuation was created to subsume the motivational and control strategies of mothers' behaviors, as well as their social-affective components, specifically as these pertain to potentially "instructive" situations in the child's home environment. Conversely, two new variables, Developmental explanations for child behaviors, and Teaching perspectives, were generated during this research to address the more strictly cognitive components of the teaching role.

Maternal individuation was operationally defined as the degree of maternal acceptance of the role of teacher. This approach requires that the mother

(a) see the child as a separate, distinct person, (b) who is continuously developing. She has a desired set of behavioral outcomes, and criteria for reaching these outcomes; she provides, or arranges provision of, the necessary experiences to achieve these goals. She controls the child firmly, but warmly, in engaging him or her toward these ends. Developmental explanations refers to the degree to which the mother explains changes in her child over time, and the child's ongoing actions, by referring to age-related process criteria, as contrasted with explanations which refer to specific traits. Teaching perspectives refers to the degree to which the mother reports taking the child's point of view in specific instances where information is to be transmitted.

Although reports of practices and expressed goals and attitudes are certainly more limited than direct home observation, it is possible to use such interview material to cover a wider range of topics. As noted earlier, a significant correlation between an earlier measure of maternal individuation and black children's achievement behaviors upon entrance into a Head Start preschool setting was obtained in a prior study (Slaughter, 1969).

This earlier research had three phases. First, open-ended maternal interviews of a population of black, lower income Chicago-area mothers were studied for major categorical groupings of responses, and several scales were developed. Second, within each scale seven indicators were established which could be rated plus (+) or minus (-). These indicators operationally defined the major categories. The purpose of the plus-minus distinction was to minimize the effect of sheer verbal fluency on the final 0-6 point rating. Third, each scale score was raised by one point to establish a 1-7 point scale, and the scales were applied to the open-ended maternal interviews concurrently obtained from another Chicago-area group that constituted the formal 1969 sample.

In this study, interview questions and scalar indicators were slightly modified so that they would be more appropriate for younger children. Two of the original scales are included in this report: Maternal Individuation (MI) Scale, and Value for School Achievement (VSA) Scale, to be discussed. The current MI scale utilizes the best indicators, defined as those most consistently in the same direction as the total score, of the three original ones: (a) Warmth toward the child, (b) Controls used with the child, and (c) Individuation of child personality. These three scales constituted Factor I of two obtained factors in the 1969 study, following principal component analyses and varimax rotation of the seven original scales.

Appendix A contains indicators, sample questions and responses for the MI scale. It also includes the specific questions and responses used in rating the 1-5 point DE and TP scales. These latter two ratings, because of the specific information desired, were conducted using more conventional procedures. No indicators were developed for the DE and TP scales.

Interviewer percent agreements were calculated per indicator for the MI scale, using a subset of ten randomly selected interviews from 26 attrited cases. Agreements averaged 82.8% on the MI scale, across all seven indicators. They were 80.0 and 92.5, respectively, on the DE and TP scales, where agreements were calculated per categorization of each questionnaire item used to rate the total scale. Complete data were available at times 1 and 2 for 66 mothers, 23, 19, and 24, respectively, in the TD, MD, and Control groups.

Maternal personality processes.

The earlier description of variables and measures associated with maternal childrearing attitudes and practices essentially contrast those goals and behaviors presume more likely to induce flexible, open child play and language behaviors. These maternal variables, themselves, essentially contrast flexible and open versus constraining attitudes and practices. Presumably, children exposed to the former human environments will be more apt to be expressly self-directed. Thus far, it is only an implicit assumption, however, that flexibility, openness, and expressed self-direction would also be characteristic of the personal systems of the mothers of such children.

In this phase of the study, emphasis was upon personal coping style and associated feelings. Three measures of ego development and esteem were used. Emphasis was also upon preferred personal life style and family functioning; a measure of expressed values was developed during the research and administered at the study's conclusion. Data on expressed valuation of academic achievement were also collected. This latter variable was partially viewed as an important control in the study.

The measures of personal coping style included (a) an adaptation of Loevinger's Ego Development (LOEV) scale, (b) the Self Esteem (SE) scale, and (c) the Personal-Environmental Control (PEC) scale.

Ego Development scale: Loevinger (1970) has elaborated a theory of ego development and an instrument (The Sentence Completion Test--a projective measure) to assess the construct. According to her, ego is a personality "process, a structure, social in origin, functioning as a whole, and guided by purpose and meaning" (Loevinger, 1976, p. 67). For Loevinger, ego development proceeds through stages of differentiation and complexity of perceptions of one's self, of the social world, and of the relations of one's feelings and thoughts to those of others. Seven levels of ego development have been formulated, with three transitional phases; most on the basis of empirical evidence compiled from the Sentence Completion Test. These stages comprise an invariant hierarchial order, with each stage being more complex than the last.

The Sentence Completion Test is a 35 item instrument. It is accompanied by a complex coding and scoring system derived from Loevinger's conceptualization of ego development and explained within a two volume scoring manual (Loevinger & Wessler, 1970). A subject's responses to the 35 items are individually assigned to one of the levels or stages. These responses are then pooled and assigned in an automatic total protocol rating (TPR) based on the cumulative frequency distribution of the 35 scores. This distribution is compared with a table of values (automatic ogive rules), and from this a final developmental score is established.

Studies of the scoring reliability have generally confirmed a high rate of interrater agreement. Test-retest reliability over a two week period was significant, but lower: .79, .44 in the two samples. In this study, using a shortened version, the test-retest correlation for the chosen group was .49 (N=24, $p < .02$). The overall sample correlation between times 1 and 2 was .38.

In this study, a shortened form was used because of time constraints. There is precedence in the literature for similar alterations; Suzman (1974) used an abbreviated version in his study. Fifteen randomly chosen protocols were examined and it was determined, in collaboration with a consultant who trained with Loevinger, that scores based on 18 items were most compatible to those based on the total 35. Eleven of the 18 items were selected on the basis of frequency distributions: 2,3,4,12,15,18,21,24,31,32. The remaining seven were selected for content relevance to the parent programs: 1,7,9,11,13,19,28. Appendix B contains the items used in this study.

Scoring reliability (percent agreement) between two coders, both of whom were trained by the consultant on the Loevinger scoring system, was .90 (15 randomly chosen protocols). The second coder was also checked against the project consultant, and was responsible for scoring 96.4% of the stems. Her reliability was 87.5% (based on eight randomly chosen protocols).

Relations between measures of IQ, the Kohlberg Test of Moral Development, and the LOEV scale have been studied (Lambert, 1972). Lambert found a correlation of .80 between Kohlberg's test and the LOEV scale. Controlling for IQ did not significantly affect the relationship between the two measures. Lambert proposed that intellectual maturity is a necessary, but not sufficient, condition for ego development.

Self Esteem scale: this variable refers to the mother's currently perceived and anticipated sources of personal gratification. Feelings of worthiness depend upon positive feedback and appraisal from significant others. However, these appraisals are contingent upon the mother's own energy and ability to invest in the persons, activities, and situations which potentially offer these positive appraisals. The Self Esteem scale emphasized both the idealized and actual investments in others. It was assumed that positive personal judgements of worthiness would follow. The variable was measured from time 2 open-ended interview data, using procedures similar to those previously described for the MI scale. Interrater reliability, based on 10 randomly selected protocols from 26 attrited cases, averaged 80.0% across all seven indicators (see Appendix B) of the scale.

Personal Environmental Control scale: this variable refers to the mother's sense that active, rather than passive, impact upon the school environment, is most effective. First used in the Hess and Shipman research, the four items are evaluated by the respondent on a five point scale which ranges from Strongly agree (=1) to Don't Know (=3) to Strongly Disagree (=5). The total score (Maximum=20) is divided by four to arrive at a final score. The scale was cross-validated by this researcher in another study (Slaughter, 1970). Split half reliabilities were calculated for 66 respondents at times 1 and 2. The coefficient for time 1 was .19, while it was .52 at time 2. The variable was not reliably assessed at time 1, but the time 2 correlation is respectable, especially for so brief a scale.

Two measures of expressed social values were used in the study. One, the Inventory of Expressed Values, was developed during the research. The other, Value for School Achievement, was assessed from open-ended interview data.

Expressed Values scale: this scale was developed to assess modernity, as contrasted with traditionalism, as a preferred life style. The structure or dimensional categories (e.g., Time, Relational, etc.) and format (forced-choice) of the inventory were similar to that used by Kluckhohn and Strodtbeck (1961), but the situations in the polarized choices were conceptually delineated in accordance with the theorizing of Inkeles and colleagues as regards the concept of psychological modernity. The development of this scale has been thoroughly discussed elsewhere (Slaughter & Walcer, 1980). Essentially, for each of twelve presented situations, two solutions are provided. The respondent is instructed to choose which would be preferred by: (a) most Black Americans, (b)Other Americans, (c) Friends, (d) Neighbors, and (e) Self.

Each situation is scored "0" (modernity) or "1" (traditionalism), for a maximum score of 12. One item, for example, emphasizes perceptions of Time as follows:

> Two people on the street were talking about the main problem with life as people are living it now.
>
> A. One person said: The trouble with life is that things just aren't what they used to be. People now can't live their lives as they have always lived them; there are too many changes, and people just can't cope with them. I'd like to turn back the clock.
>
> B. The other person said: Well, what's past is past--no use crying over spilled milk. I want my life in the future to change for the better; for the most part new ways of doing things are an improvement over old, outmoded ones. Might as well keep moving ahead.

In this instance A is the traditional choice.

It was reasoned that self scores of intervenors and program participants would be more similar, and more modern, than the scores of control group participants at the study's conclusion. Criterion validity was established on the scale, using a comparable sample of 67 lower income black females who were currently enrolled in a high school equivalency degree program at a local Chicago area junior college. The Kuder-Richardson 20 for this group was .54 ($p < .01$), but it was nonsignificant for the intervention group. The measure is included in this report because subsequent item analyses of the instrument revealed important descriptive information, and because the average self scores of the three intervention groups differed in predictable ways.

Value for School Achievement scale: this variable refers to the degree of the mother's emphasis upon educational achievement in the family. The measure of the variable includes both her expressed aspirations for herself and her child, in addition to her actual past and present participation and involvement in the school setting. The scale was applied to time 1 open-ended interview data, using procedures previously described for the MI and SE scales. Interrater reliability, based on 10 randomly selected protocols from 26 attrited cases, averaged 85.7% across all seven indicators (see Appendix B) of the scale. The scale was adapted from previous research with a similar population of mothers (Slaughter, 1969). However, indicators and interview questions were adjusted to the younger ages of the children in this study. In the earlier study, low, but significant, correlations were obtained between this measure and standard measures of preschool children's achievements (.24 and .21 on the Binet mental age and Preschool Achievement Inventory, respectively; $N=90$, $p < .05$). The scale loaded on Factor II of a principal component analysis of the original seven interview scales (two factor solution, varimax rotation).

Data Collection Procedures

Table 3 indicates the dates and location of data collection for each measure. Programs followed a school calendar year in both years. During the first study year, when all participants began simultaneously, time was required for program staff to build the trust upon which the research was dependent. There were many cancellations for the first testing; program and research staff worked very hard to establish the necessary rapport. The first child testing was completed about three months after programs began: 2/15/75. Individual children were tested at least seven months after the first one in the second testing. Observations and interviews were typically conducted towards the mid to end of the first and second project years. Tests and observations were conducted in specially prepared rooms at each housing site. Evaluations were conducted in familiar settings to maximize the comfort of participants. CHA released apartments to United Charities for project efforts for the duration of both project years. At site A, this space was shared by project and research staff, but at sites B and C, the research staff had separate facilities. Interviews were conducted at the home of the mother and child.

Child tests.

The psychometricians were black females who had at least a B.A. degree in psychology or education. All had prior experience working in day care centers or nurseries as teachers. Their ages ranged from 23 to 37 years. All participated in an organized training program developed and conducted by supervisory staff. Several pilot testings were part of the four-week program. The initial testing program was developed after on-site consultation with Levenstein and members of her staff.

During the first and second time periods, the Cattell was administered first, followed by the PPVT (Form A at times 1,3; Form B at time 2). The "game-like" quality of the tests was emphasized to the child, but each test was strictly administered according to guidelines developed in the test manual. At time 3, the PPVT was administered first because of the length of the McCarthy. Testing in the first and second sessions took about 30-40 minutes per child, but up to 60 minutes at the third session. The mother of the child, but no other person, was present during testing.

Observations of mother-child dyads.

The primary goal of the assessment of mother-child interaction was to determine how mothers of young children teach them in informal interactive contexts. A home living room situation was simulated in which children of this age might interact with their mothers. The setting permitted display and characterization of the variety of maternal behavioral styles as well as the import of these styles for the children's play behaviors. A post-observation interview was established to permit at least a preliminary check of mothers' perceptions of how they and their children might be affected by the process of being observed.

The final post-observation interview was an extensive adaptation of one initially used in an earlier pilot. Findings of the pilot study led to restriction of the length of each observational session to 24 minutes. This was found to be the maximum length of time that mothers and children aged two years remained in the same room together at home during the day.

Preliminary work during the study involved three additional steps: (a) the receipt, design and planning of the observational setting, including pre-observational instructions for mothers; (b) design and planning of videotaping procedures; and (c) recruitment of a pilot sample for initial and continuing observer training.

The comfort and familiarity of participants were important to the ecological and psychological validity of the assessments throughout data collection. Conversely, given the constraints of this quasi-experimental study, baselines had to be established in contexts experienced by all study participants, that is, in a standard setting. Both aims were accomplished through the use of the designated apartments in each of the housing projects to conduct observations.

Each designated room at sites B and C was scaled for comparability, approximately 12 by 16 square feet. At site A, the room was slightly smaller: 12 by 11 feet. Each room contained a large chair for the mother, two small chairs, and a table at which both mother and child might sit, a television set which was off at the onset of the observation, magazines, and a magazine rack near the mother's chair, a large rug in the center of the floor, atop which a variety of toys were placed. Appendix C contains a sketch of the observational room and a list of the toys used at times 1 and 2.

Facing each room was a large white canvas screen that stretched from floor to ceiling through the use of large rods which gripped floor and ceiling. A square was cut in the canvas to permit easy insertion of the videocamera. Video equipment, and the videocamera operator were housed behind this screen. Directly in front of the canvas and to its left was a chair in which the observer sat, recording the nonverbal behaviors of the mother at 10 second intervals, using a timer synchronized with the operations of the videocamera.

Field observations were conducted by a black male-female team at each site. During data collection, three teams worked simultaneously. The teams were typically composed of young adults pursuing graduate and undergraduate studies at Chicago-area universities. The male team member operated all video equipment. The female member structured the session for the participating dyads.

The female observer, who did not interact with mother or child during the 24 minute session, had three responsibilities: (a) to initially greet each mother and child and instruct the mother as to the plans for the session; (b) to record maternal behaviors at 10 second intervals during the session such that in the event mother and child were too distant from each other to be simultaneously on camera, a record of the mother's behavior could still be obtained; and (c) to conduct the post-observation interview for about 10 minutes with the mother after the session ended.

During the pre-instructions, each mother was advised that the play session would last about a half hour, to be followed by a short interview which would center around the activities of herself and her child during the session. She was instructed to feel free to do whatever she wanted within the confines of the room, and to act as nearly as possible as she would at home. Various supplies were designated for her own or her child's use (e.g., Kleenex, Pampers), and the observer also indicated that she would not talk with her or her child during the session. She was told, however, to feel free to communicate with her child as she would ordinarily do at home, and asked if she had any further questions. If there were no questions, the session began immediately following this introduction.

After the play session, each mother received the post-observation interview, while the child ate animal crackers and continued to play. Aside from direct questions about her and her child's experiences during the session, and her perceptions of the purposes of the session, the mother was also queried as to her perceptions of her own and her child's intentions during the play period. In all, each observation session, therefore, averaged about 40 minutes.

Equipment was stored at the housing sites during data collection. A Bleeper system permitted superimposition of a mild buzz at the start of each 10 second interval on the videotapes, for purposes of data coding. At the onset of the tape, and every 60 seconds thereafter, the buzz was slightly longer so as to serve as a marker for coding purposes. Bleeps were applied to all collected videotapes.

The pilot sample for observer training was obtained from several sources, including the children of friends, research assistants, and so on. Two stipulations were made of them: that they be black, and that they have young children in the same age range as that currently coinciding with the children in our two year study. Pilot participants were paid for their cooperation; all but one or two were conducted at the university in a large room arranged similarly to the rooms of the main study. Field observer training typically involved the use of both these pilot participants and, at time 2, the videotapes of attrited dyads.

Maternal behavioral records obtained have been used only to determine whether, when mother is quiet and not visible to the camera for long time periods, she is totally uninvolved with the child (e.g., reading a magazine) or essentially silently monitoring his or her activities (e.g., looking at the child). In the coding system, the distinction is between No theme and Supportive behavior, though in neither instance is the mother classified as Interacting with the child.

Female field observers did not code the actual videotapes. This work was done by a separate set of black and white observers trained by this investigator at Northwestern University. Black females coded maternal behaviors; black and white females coded the children's behaviors. Coders of maternal and of child behaviors worked independently of each other. These observers did not know the assigned group of any dyad. The order of tapes presented to them for coding was randomized by program group and site, such that no one group or site would be biased by the experience level to date of the coder.

Interviews with mothers.

The time 1 interview was constructed by this researcher and another assistant using previous research as a guide to question formulation in the open-ended portion. The time 2 interview was also constructed by this researcher, but all field research assistants participated. Feedback from monthly meetings with staff of United Charities was also used. The interview battery consisted of: (a) Part I, which focused on demographic and social background information (updated at time 2); (b) Part II which was the open-ended interview, and which included all measures except, (c) the Expressed Values scale; and (d) the Sentence Completion Test. After each interview, the female interviewer also completed a form, Cooperation with the interviewer, designed to assess the rapport between herself and the mother during the session. Interviews at times 1 and 2 were pretested at 2 1/2 hours.

Interviewers were black females with previous interviewing experience in black lower income communities. In the first year, three of the six (two per site) were graduate students in social work; two others were graduate students in education and behavioral sciences, and the last was on leave from college teaching in a Black Studies program. In the second year, the three interviewers (one per site) were not graduate students. All had college experience, two were mothers, and one was a senior in elementary education. All had prior work experiences which included service with the public. The interviewers were, as were the field testers and observers, self-referred after staff made several contacts in the Chicago area black community.

Training consisted of four major activities. First, trainees read project materials (excluding study hypotheses) as well as related readings on the black family. During the summer of 1974, as the initial research and project staff from United Charities met each other, sessions were held which described the total effort, including programs. These sessions were taped, and the tapes were made available to the prospective interviewers as a way of introducing the total project. Second, the interviewers reviewed all the interview materials and discussed them at length with staff. Some role playing was done during this period. Third, at least two pilot interviews were conducted and taped as well as handwritten. Afterwards, feedback on the tapes and written records were made. Emphasis was placed upon writing the mother's verbatim responses to each question. Time 2 trainees also reviewed the pilot interviews of time 1 trainees (tapes and written materials) during this period. Finally, trainees met program staff at their assigned sites and reviewed their field operations in detail with the research project director.

Interviewers were instructed to identify themselves to mothers as working with the Family Development Program of United Charities of Chicago, as the project was known to the communities, as they scheduled their own appointments, either by phone or in person. This had not been the case for either field testers or observers. A site staff member scheduled testing and observational appointments, per instructions from the research project director with, whenever necessary, additional support from program staff. Though infrequently used, funds for babysitting were available for mothers in advance of any appointments.

Consolidation of data collection procedures.

The order of data collection was test 1, observation 1, interview 1, test 2, observation 2, test 3, and interview 2. While the time 2 test was a mid-point in the study, time 2 observations and interviews correspond, along with the time 3 test, to the end of the study.

In the first year, it was quickly decided to observe, interview, and administer test 2 only in instances where children received the first test. In the second project year, observation 2 was guided by who completed the first. Interview 2 and test 3 were overlapping activities. Since six months elapsed between the end of test 2 and the beginning of observation 2, the pool of persons available for observation 2 also became the potential pool for test 3. Most attrition had occurred by then. Effort was made to reach all mothers interviewed at time 1 in the main study for interviews at time 2.

Child tests: At the first child testing, 131 children were evaluated. Of this number, 48 subsequently attrited.[2] At the second testing, of 83 possible, 81 were evaluated. At the third testing, of 77 possible, 67 were evaluated. In the main study group, 83 received the Cattell at time 1, 76 at time 2. At time 3, 64 received the McCarthy. At times 1, 2, and 3 respectively, 74, 77, and 65 received the PPVT.

Discrepancies between Cattell-McCarthy and PPVT figures indicate that, for one reason or another, the child could not be administered two tests in the session.

All tests were scored twice, first by examiners, and later by office research staff. Seven booklets in the Cattell-McCarthy sequence, and ten in the PPVT sequence, were deemed invalid as a result of this second scoring. All data on these cases were deleted from more extensive analyses, leaving 57 complete data records for the Cattell-McCarthy sequence and 55 for the PPVT sequence.

Observations: At time 1, 110 mother-child dyads were observed. Of this number, 27 subsequently attrited (one tape in the attrited group was defective, so only 26 were available for other research purposes). In the main study group, of 83 possible (those completing child test 1), 83 were observed. At the second observation, 77 of the 83 who completed the first observation were still active with programs. Of the six unavailable dyads, five did not keep appointments at time 2 (the tape of one was defective at time 1), and the child of one died in an automobile accident. Nine of the 77 tapes were found to be defective (*N*=8 from time 2), and these records were deleted from further analyses. The deletion left an observation sample of 68 dyads for times 1 and 2.

Interviews: At time 1, 108 maternal interviews were conducted, of 110 possible (number of observed mother-child dyads at time 1). Of this number, 26 subsequently attrited. In the main study group, 82 of 83 possible mothers were interviewed. At time 2, 69 mothers were interviewed.

Fourteen additional mothers in the potential pool of 82 could not be reached for an interview before interviewers terminated their work in mid-July, 1976. This second interview was the last point of research evaluation; most were conducted as programs were officially closing. Six of the 14 mothers had no telephone and could no longer be personally contacted. Three refused, one had moved, and four had begun to work during the day. Interviewers, for their own safety, had been instructed not to work in the p.m. Of the 69 mothers interviewed, one had not been seen at time 1, leaving a total of 68 mothers interviewed at both times 1 and 2. Complete data were available for 66 of them.

Data were obviously collected on more children and families than could be used to address the present study questions. Families who attrited, typically did so between the end of the first school calendar year in June, 1975, and the beginning of the second formal program year in October, 1975. Throughout the analyses, whenever possible the effects of attrition on the findings were assessed.

Data Analysis

Although data in each measurement area were analyzed independently of the other, the strategy for data analysis was similar. First, in each area: tests, observations, and interviews, main sample and attrited groups were contrasted. Second, program groups and sites, given the 3 X 3 factorial design, were contrasted, using only complete data samples. When three data points were available, the data were subjected to 3 X 3 X 3 (program, site, time) analyses of repeated measures. If only two data points were available, data were subjected to covariance analyses, using the time one measure(s) as covariate(s). If there were reason to consider any measure at only one time period, or in isolation from other related measures, this was done. However, generally multivariate procedures were used.

Observational data, in particular, were subjected to two separate analyses, one with raw and another with transformed scores. The transformed (natural log) scores were designed to promote multivariate normality. Since results were identical for both raw and transformed scores, only the latter are presented. Prior to these analyses, variables which, upon inspection of means and standard deviations in each program group/site cell, did not occur with sufficient frequency were deleted.

Third, where program effects appeared to exist, the results were examined for the effects of any attenuating factors which would mitigate or negate them. Occasionally, alternate, potentially confirming analyses were also performed.

Finally, the results obtained were examined from the perspective of the initial hypotheses, as well as subsequent program development over the two study years.

Results

The essential pattern of results is this: at the conclusion of the study, except on psychometric tests, whenever program groups do differ from controls, the Discussion (MD) group program ranks first, and the Toy Demonstration (TD) program second. The TD group ranks first on tests, MD group second. Changes in children, beyond those associated with maturation are paralleled by many predicted changes in maternal behaviors, childrearing attitudes, and personality processes. Family structure is implicated in the findings because, of all study groups, the MD group was characterized by the greatest proportion of attenuated nuclear families. Narrative data of MD group process over the two years of the study indicate that initial focus on child development and childrearing goals subsequently became a catalyzing influence for individual commitment to groups. The mutual social experiences of group members may well have then resulted in more direct personal benefits to mothers as women. Details of these results are presented in accordance with the listing of variables, measures, and expected outcomes portrayed in Table 3.

Intellectual development of the children.

There are no differences between the main study (N=83) and attrited (N=46) groups on the Cattell 1 (F(1,127)= 0.235, t=0.48). There is also no difference between the study (N=74) and attrited (N=37) groups on the PPVT 1 (F(1,109)= 0.006, t=0.08). In the main study group, the mean Cattell 1 and PPVT 1 IQs are 111.0 (SD=12.2) and 99.1 (SD=12.1). In the attrited group, they are 110.0 (SD=9.9) and 99.2 (SD=12.9). There is also no difference in time elapsed prior to this testing for the two groups (F(1,129)= 1.364, t=1.17), nor any differential rate of attrition by sex of child (X^2 (1)=0.047, p=0.83).

By attrited study group the mean Cattells are (a) TD: 111.4 (SD=8.58, N=15); (b) MD: 109.9 (SD=10.77, N=26); and (c) Control: 106.0 (SD=8.72, N=5). The mean PPVTs are (a) TD: 105.4 (SD=12.41, N=12); (b) MD: 97.5 (SD=12.61, N=21); and (c) Control: 90.5 (SD=6.86, N=4). No significant mean differences are evident within study group in the first test performances of children who stayed in contrast to those who attrited.

Three-way repeated-measures analyses of variance (unweighted means) of PPVT 1-3 data reveal significant main effects for groups (F(2,46)=3.272, p=.05), and time (F(2,92)=83.96, $p < .001$), as well as site x time interactions (F(4,92)= 2.942, p=.02). Table 4 presents additional information.

Insert Table 4 about here

At time 1, controls score significantly (Scheffe tests) lower than both the TD ($\underline{F}(2,46)=4.389$, $\underline{p}<.05$), and MD ($\underline{F}(2,46)=3.652$, $\underline{p}<.05$) groups. At time 2, this is also true: TD ($\underline{F}(2,46)=4.161$, $\underline{p}<.05$); MD ($\underline{F}(2,46)=3.888$, $\underline{p}<.05$). At sites A and C, in particular, controls score lower than program groups at times 1 and 2. At time 3, groups do not differ. All groups are characterized by a linear decline on this instrument; at time 3, scores of groups converge.

Two-way analyses (program x time) of variance with the Cattell-McCarthy sequence reveal a trend toward program effects ($\underline{F}(2,54)=2.735$, $\underline{p}=.07$), a significant main effect for time ($\underline{F}(2,108)=13.413$, $\underline{p}<.001$), but no interactions. Groups do not differ at time 1. At time 2, the TD group mean score differs significantly and positively from the control group ($\underline{t}(40)=2.324$, $\underline{p}<.05$), but not from the MD score ($\underline{t}(33)=1.588$, $\underline{p}<.05$). At time 3, the MD group differs significantly and positively from controls, as shown in Table 5 ($\underline{t}(34)=2.036$, $\underline{p}<.05$), but a similar trend for the TD program does not reach significance ($\underline{t}(40)=1.979$, $\underline{p}>.05$).

Insert Table 5 about here

The MD group finding, however, is not sustained in group x sites analyses using the McCarthy IQ as the dependent variable ($\underline{F}(2,47)=2.056$, $\underline{p}=.14$). Rather, differences between groups are sustained only on the Verbal subscale of the McCarthy ($\underline{F}(2,47)=3.452$, $\underline{p}=.04$). Scheffe tests reveal that the TD program is significantly different from controls ($\underline{F}(2,47)=6.977$, $\underline{p}<.05$), and the MD program approaches, but does not reach, significance ($\underline{F}(2,47)=4.361$, $\underline{p}>.05$). No main effects for site or interactions are observed. Verbal subscale scores for the TD, MD, and control groups are, respectively, 53.8, 52.8, and 46.7.

Data support partial confirmation of the prediction that program groups would differ from controls at time 2 on the Cattell, but not before. Only the TD group differs; the MD group does not. Data do not support the prediction that programs would differ at time 3 from controls on the PPVT. Rather, groups differ initially, but are equivalent by time 3. Finally, only the MD group differs significantly from controls on the McCarthy IQ at time 3. However, the TD group is the only program which differs significantly from controls on the McCarthy Verbal subscale, the only subscale which sustains group differences in groups x sites analyses. A trend for the MD program does not reach significance.

IQ gains on both sequences were predicted. Instead, there is evidence of a highly significant linear decline over time on both test sequences. TD children do not, as expected, appear significantly superior to MD program children at times 2 or 3 on either test sequence. On the Cattell TD children demonstrate an earlier superiority to controls than do the MD children.

There are interpretations alternative to program effects, particularly as demonstrated in the Cattell-McCarthy sequence, but these can be eliminated.

Examiner bias in favor of the MD group cannot be a factor; if so, one would expect the same bias towards this group throughout all tests, and at both times 2 and 3. Also, the same examiners were not used throughout the same sites during the study, and completely new examiners were employed at the third testing.

While Cattell norms are not as recent as PPVT norms, the program children are superior to controls on the most recently normed test of all used: the McCarthy. Differences are not strictly a function of the use of old norms.

Shifts in sample composition have also not contributed to apparent group differences on one test sequence and not the other. Children who did not take both tests have, on the average, lower scores in all groups than those who did.

Six children who received the PPVT 1,2,3 were not in the Cattell-McCarthy sequence. They have average PPVT scores of 93.0, 77.7, and 70.0 at times 1, 2, and 3. Similarly, eight children received the Cattell-McCarthy sequence, but are not part of the PPVT complete data sample. They have average IQ scores of 109.1, 96.2, and 90.8 at times 1,2, and 3 on Cattell 1, 2, and McCarthy tests. Except for the average Cattell 2 score (i.e. 96.2), in each instance, the average performances of these 14 children are more similar to the test group means of the sequence they did take, than the one they did not (see the three group averages in Tables 4 and 5). Children who did not take both tests in the session most likely are simply more difficult to evaluate, regardless of the particular test sequence involved.

Program effects, however, must be distinguished from degree of program implementation, and considered in relation to the family structures of the participating dyads. Figure 1 shows the TD program profile of average IQ score on the Cattell-McCarthy sequence by sites A,B, and C. The variability across sites is very striking and suggests at least the possibility that this program may have been implemented better in some sites (C and A as contrasted with B), than others, since a similar profile for controls revealed a uniform linear decline like site B in the TD program for all sites A,B, and C. Figure 2 presents the profile of the MD program over time by site. This profile shows evidence of program effects: the pattern of change over time is very similar for the three sites.

Insert Figure 1 about here

Insert Figure 2 about here

The implications of the linear decline as well as the diverging results of the two test sequences will be discussed later.

Observed maternal teaching style and child play behavior.

A number of observational variables, each of which have obvious interdependence, were assessed. A plan to test for effects evident beyond those interdependencies suggested a multivariate approach to data analyses. However, because several variables had skewed distributions, data were transformed in order to promote multivariate normality using the natural log equation. Analyses were also performed using raw scores and the results found to be identical. For the sake of parsimony, data will be presented only in the form of transformed scores. Group mean comparisons typically take the form of MD group participants versus TD and control groups, or TD versus MD and control groups. Since this was the order of results obtained using child test data, it was chosen as the best initial approach to examination of the observational data. In view of the hypotheses noted in Table 3, clusters of maternal variables were analyzed, separately from clusters of child variables.

Because the 26 attrited cases were used to (a) develop the observational system, and (b) train field observers and videotape coders, no effort was made to contrast stays and drops on time 1 observational measures. However, it was possible to contrast the stays ($N=68$) with the drops ($N=13$) lost at time 2 due to more attrition and tape failures. The F-ratios for all pertinant maternal and child measures range from 1.01 to 2.74 ($M=1.57$) and are not significant.

Table 6 presents the results of a MANOVA using those maternal and child observational measures at time 1 which occurred with sufficient frequency at both time periods to subsequently enter as covariates in a MANCOVA. The multivariate F's for groups x sites, sites, and groups, are nonsignificant at the criterion level of $p \leq .05$. This indicates that none of the univariate F's,

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Insert Table 6 about here

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whether or not the reach the $p \leq .05$ level of significance should be interpreted. At time 1, groups do not differ in rated occurrence of either maternal or child variables.

Table 7 presents the results of a MANCOVA or multivariate and univariate analyses of covariance for time 2 maternal and child observational measures, using time 1 measures as the only covariates. The multivariate F's for groups x sites and for sites are nonsignificant for both maternal and child variables. However, the multivariate F's for groups are significant for both maternal ($F(12,96)=2.90$, $p<.01$) and child ($F(12,96)=2.93$, $p<.01$) variables. This indicates that any significant univariate F's which pertain to groups can be comfortably interpreted at time 2. Results of the MANCOVA show a main effect for group at time 2, particularly on interacting ($F(2,53)=6.924$, $p=.002$), expanding ($F(2,53)=4.785$, $p=.01$), instructing ($F(2,53)=2.522$, $p=.09$), object uses-nonverbal ($F(2,53)=4.332$, $p=.02$), object uses-verbal ($F(2,53)=3.466$, $p=.04$), and groups-verbal ($F(2,53)=2.660$, $p=.08$).

Insert Table 7 about here

Table 8 presents the means and standard deviations by group at times 1 and 2 for all maternal variables listed in Table 3. Some variables have a zero frequency in one or more (group/site) cells at either times 1, 2 or both. These are: (a) restrictive, (b) directive, and (c) suggestive. They are deleted from the multivariate analyses.

Insert Table 8 about here

MD mothers differ from TD and control mothers at time 2. Post hoc tests indicate that the MD group average differs significantly and positively from the TD and control group average on interacting ($t=3.018$, $p=.004$), expanding ($t=2.654$, $p=.01$), and instructing ($t=2.230$, $p=.03$).

Data in Table 8 indicate that while, as children age, TD and control group mothers reduce their interactive time with them, MD mothers retain the original level shown at time 1, but more often use the time to expand upon or instruct the child about ongoing activities. MD mothers, as a group, do differ in meaningful ways from other mothers and the difference is based upon a teaching orientaton to the children.

Differences were predicted favoring program groups by comparison to controls on interacting, expanding, and instructing at the conclusion of the study. These predictions are confirmed only for the MD group, by comparison to the other two groups, TD and control. No differences are found between groups on supporting, the other variable in which program groups were expected to be superior to controls.

Differences were predicted favoring controls, by comparison to program groups on restricting, redirecting, directing, suggesting, and no theme. Restricting, directing, and suggesting occur too infrequently in the setting to test these operational hypotheses. No significant differences are found between groups at time 2 in maternal time spent redirecting children or in total lack of involvement (no theme) with them.

The teaching orientation of MD mothers seems to reflect either a shift in their understanding of the age-related needs of their children, rather than relaxation of a punitive or restrictive orientation, or a move from no involvement to some involvement with the children. There are sex differences in observed changes in maternal behaviors.

Reanalyses (MANOVA, MANCOVA) of observational data using a 3 X 2 factorial design were performed to investigate the effects of sex of child on observed behaviors. No interactions are significant for maternal behaviors. However, the MANCOVA reveals a main effect for sex ($F(2,53)=2.358$, $p=.04$). Inspection of the data reveals that between times 1 and 2 the expanding scores of MD mothers of boys rise sharply, while those of MD mothers of girls essentially remain consistently high over time ($\underline{F}$(2,53)=4.124, $\underline{p}$=.05). For both sexes, TD and control mothers' scores on this variable remain relatively constant. Post hoc tests of estimated means indicate that the average expanding score of MD mothers is significantly different from the combined averages of TD and control mothers ($\underline{t}$=2.506, $\underline{p}$=.02) at time 2.

Table 9 presents the means and standard deviations by group at times 1 and 2 for all child variables listed in Table 3. Again, some variables have a zero frequency in one or more cells at either times 1, 2, or both, and are deleted from the multivariate analyses. These are: (a) discrepant, (b) social contact, and (c) representation. Post hoc tests indicate that MD children differ significantly and positively from TD and control children on object use, verbal ($\underline{t}$=2.418, $\underline{p}$=.02), and possibly, groups, verbal ($\underline{t}$=2.265, $\underline{p}$=.03) categories at time 2. TD children differ significantly and positively ($\underline{t}$=2.639, $\underline{p}$=.01) from MD and control children in the object use, nonverbal category.

Insert Table 9 about here

MD children probably use more expressive language throughout their play activities with toys than children in the other groups. They verbally assert themselves more frequently. The finding that TD children are more likely than either of the other two groups not to use language during play with single objects is unanticipated.

Differences were predicted favoring program groups by comparison to controls on three aspects of play structure: imitation, representation, and object uses. Program children were also expected to expend more time verbalizing by comparison to control children. Program children were predicted to spend less time, by comparison to controls, in transitional activities. No specific predictions were made for non-play activities, nor for grouping per se, as an aspect of play structure. The most consistent finding, however, is that at time 2

MD children, by comparison to TD and control children, more often engage in explicit verbalizations while using one or more toys, whether or not these verbalizations are (a) coherent, (b) of high "quality" or (c) directed toward mother. Groups do not differ in time expended in nonplay and transitional activities. With one exception, children in the three groups also do not differ in the structure of their play patterns. The exception is the finding that TD children engage in significantly more silent exploration of toys than either MD or control children.

Test results, however, clearly indicate that TD children, as a group, readily express themselves to adults when queried. Conversely, control children do not speak as often during play, and do not as readily verbalize on demand in the test situation. On other measures of play structure and style, they obtain scores quite similar to those of TD and MD children. Further, reanalyses of these data by group and sex of child, reveal no sex differences in observed child play behaviors at times 1 or 2.

While there is obvious individual variability in the structure of children's activities, as well as in nonplay and transitional behaviors, children in all three groups use all observational categories. Similar low levels of unhappy affect or nonplay behaviors suggesting boredom are obtained for all groups. A low level of seeking of adult attention for other than instrumental purposes, is also characteristic of all groups. Children in all groups explore and classify objects. In addition, children in all groups reveal low levels of imitative or pretend play.

Separate principal component analyses (varimax rotation to a three factor solution) were conducted with all child variables listed in Table 3 and two maternal variables, interacting and no theme, using raw score data first at time 1, and then at time 2. The first factors, in both instances, are virtually identical and are labeled Interactive Play. Interacting, no theme, and object uses-verbal have the highest loadings on Factor I at time 1, and the factor accounts for 50.5% of observed variance. At time 2, interacting, no theme, groups-verbal, and object uses-verbal have the highest loadings on Factor I. This time the factor accounted for 56.6% of observed variance. The responsivity of the mother is significantly related to the child's verbal expressiveness during play. However, children in all three groups use all play and nonplay coding categories, even though by time 2, their mothers are differentially involved with them.

A MANCOVA was performed with time 2 maternal and child variables, using five other covariates: (a) number of other children under age 16 in the child's household, (b) child's birth order, (c) child's age in months, (d) mother's age, and (e) a clinical rating of mother's perceived comfort of herself and her child during taping, using post-observation interview data.[3]

None of these covariates alter the original results at time 2 on either maternal or child variables in this sample (N=68) though there is a reasonable range of scores on each of these covariates. Maternal years of education was not used as a covariate. Standard deviations on this variable are quite restricted and range from 0.82 to 2.44. Means range from 10.2 to 11.5 over the nine cells. These averages are virtually identical to those reported in Table 2 for the larger group (N=83) where no study group differences were found on maternal years of education.

After each videotape coding, the child observer separately classified the child and mother on a 5-point nominal scale for tape language clarity as follows: (a) Volume clearly audible, speech clear and understandable; (b) Volume barely audible, speech either too soft, "mumbled" or due to direction; (c) Few words are clearly understandable; volume not audible or speech mumbled; (d) Not enough speech to judge or no speech at all; (e) No sound at all (These 9 tapes, 4 at time 1 and 5 at time 2, were jointly coded by this researcher and one assistant.) Most rated dyads are categorized in (a)-(c).

The distributions of scores across groups and sites were compared. At time 2, the chi-squares for groups are nonsignificant for ratings of the language clarity of both mothers ($\underline{X}^2(8)=14.29$, $\underline{p}=.07$) and children ($\underline{X}^2(8)=11.21$, $\underline{p}=.19$). Results are also nonsignificant across sites for ratings of mothers ($\underline{X}^2(8)=7.57$, $\underline{p}=.48$) and children ($\underline{X}^2(8)=8.15$, $\underline{p}=.42$). Raters did report, however, that when mothers and children were consistently interacting it was considerably easier to infer the content of their speech from the overall context.

Maternal childrearing attitudes and personality.

Stays ($\underline{Ns}=81-79$) and drops ($\underline{Ns}=25-24$) were contrasted on the MI, DE, and TP scales, the LOEV and PEC scales, and the VSA scale, using time 1 measures. Mothers who stayed in the study during the two years have significantly higher time 1 scores on the MI scale, than mothers who left soon after the first year interview ($\underline{t}(102)=2.64$, $\underline{p}=.01$). The mean of stays is 4.34 ($\underline{SD}=1.23$), while the mean of drops is 3.60 ($\underline{SD}=1.22$). This is the only observed significant difference. Most of the attrited mothers interviewed were MD group mothers (15 of 26, or 57.7%). Possibly, this group of mothers was specially self-selected and therefore their childrearing views were not influenced by program experiences during their year of participation. An alternative view, that mothers who remained in the study were initially more "individuating," seems unlikely because of the random sampling procedures followed, and especially because the two groups do not differ on any other social variables except number of children in the household. Notably, mothers who remain in the study have more children in the household than mothers who left ($\underline{t}(102)=2.01$, $\underline{p}=.05$). Main study mothers have an average of 4.13 ($\underline{SD}=0.26$) children under age 17 in the household; attrited mothers have an average of 3.04 ($\underline{SD}=0.48$).

No differences were found between the three study groups on value for school achievement. The VSA scale was given only at time 1 as a measure of a possible intervening influence on receptivity to programs. Mean scores on this 1-7 (high) point scale are respectively 3.77 (SD=1.53), 3.64 (SD=1.60), and 3.51 (SD=1.34) for the TD, MD, and control groups.

Multivariate and univariate analyses of covariance for time 2 maternal scales, using identical time 1 measures as covariates, were performed. The multivariate F is nonsignificant ($F(12,96)=1.528$, $p=0.13$).[4] However, given the initial differences between main study and attrited samples on the MI scale, and the exceptionally large univariate F on the LOEV scale ($F(2,52)=7.652$, $p<.001$), additional analyses with these two measures were conducted.

Insert Table 10 about here

Although groups do not differ on the MI scale at time 2, they do at time 1. Two-way analyses of variance (groups x sites), using the complete interview data sample reveal significant main effects for groups ($F(2,54)=7.514$, $p<.01$), and a trend toward site effects ($F(2,54)=2.668$, $p=.08$), but nonsignificant interactions. The mean scores (MI scale, time 1) of MD ($p<.01$) and TD ($p<.05$) participants are significantly greater than those of controls (Scheffe tests). The means for the MD (N=19), TD (N=19) and control (N=23) groups are 5.10, 4.68, and 3.70. Note that the 14 mothers not interviewed at time 2 who remained throughout the study have an average MI score of 4.07 at time 1, not noticeably different from the average of 4.49 for the three study groups.

There are four alternative interpretations of these data. First, MD mothers may have initially constituted the most progressive of the three study groups or second, become so through a process of selective attrition. Third, controls may have benefited from being part of a "program" such that their own attitudes spontaneously changed between times 1 and 2. Fourth, the MI scale may not be a sensitive measure of other than very gross changes after it has once been administered. In short, subsequently obtained responses are greatly influenced by prior experiences with identical questions.

The first interpretation is untenable because drops from the study, who are largely MD program participants, have significantly lower MI scores than stays. Second, it is quite possible that subsequent decisions to remain were governed by preexisting attitudes. At this point both program experiences and prior attitudes are inextricably fused.

The third and fourth interpretations, however, are also equally possible. Reports at time 2 of controls who remained throughout the study indicate that joint mother-child participation in the evaluation as well as the "gifts" of toys received by the children cause the mothers to feel part of an ongoing program. Further, all groups increase scores on the MI scale by time 2, but the controls increase most, moving from an average of 3.70 to one of 4.61. Increments by MD and TD program groups are not as great. The MD group increases from an average of 5.10 to 5.48, and the TD group from 4.68 to 5.21. Certainly, the first administration of specific childrearing questions to mature adults could stimulate reconsideration of their own views such that, at a later time, different and more progressive responses might be offered to identical questions.

The results of data analyses involving two step-wise regressions suggest, but do not conclusively prove, that (a) controls did spontaneously change following administration of the first MI scale, and (b) the change was not simply toward a perceived more socially desirable response pattern.[5]

A stepwise multiple regression was performed using time 1 data. The MI score was the criterion variable, and the other time 1 childrearing, personality, and social background variables, as well as study group (MD=1, TD=2, control=3), were predictor variables. The sample consisted of all mothers who remained throughout both study years. The first predictor, of 13 accepted predictors, is study group (F(1,72)=19.29, p=.01). The second predictor, which increases the multiple r from .46 to .57, is Developmental explanations for child behaviors (F(2,71)=16.87, p=.01). Using only time 2 data and identical procedures, the first predictor is Self esteem (F(1,56)=17.15, p=.01). The second, which increases the multiple r from .48 to .51, is Developmental explanations for child behaviors (F(1,55)=9.65, p=.01). Study group is fourth, and adds little (.011) to the r square change. Although at time 1 study group membership is an important predictor of individually expressed childrearing attitudes, by time 2 the influence of study group has waned.

At time 2, no significant differences are found between groups on the SE (Self esteem) scale score. The mean scores for MD (N=19), TD (N=23), and control (N=24) groups are 5.21 (SD=1.46), 4.65 (SD=1.72), and 4.21 (SD=1.44).

In the MANCOVA, the LOEV scale is the only repeated measure on which a main effect for group is observed at time 2 after all time 1 year measures had been covaried in the one way analyses performed. Post hoc analyses of estimated means indicate this difference also favors the MD participants, particularly over controls ($p < .01$). Mean scores on the time 2 LOEV scale are 3.63, 2.95, and 2.35 for the MD (N=19), TD (N=19), and control (N=23) groups.

Since this MANCOVA did not control for site effects, two-way analyses of variance (groups x sites) were performed using the LOEV 2 score as the sole dependent variable. Main effects for both groups and sites result. The effect for group is positive (F(2,54)=2.995), p=.058), but the effect obtained for site is even more highly significant (F(2,54)=3.632, p=.033). Interactions are nonsignificant. The data are presented by groups and sites in Table 11.

Insert Table 11 about here

Inspection of cell means indicates that, at site A, LOEV 2 scores are high for both program groups, by comparison to controls, while at sites B and C, groups either equal or only slightly surpass controls. On average, however, MD participants are clearly superior to controls at every site.

Step-wise regressions, using procedures similar to those employed with the MI scale, but including time 1 as well as time 2 variables with LOEV 2, were performed. At time 1 Study group ranks seventh as a predictor of the LOEV 1 score. However, it ranks second as a predictor of the LOEV 2 score. Developmental explanations for child behaviors ranks first at time 2 ($\underline{F}(1,56)=10.52$, $\underline{p}=.001$), but Study group increases the time 2 multiple $\underline{r}$ from .40 to .53 ($\underline{F}(2,55)=10.90$, $\underline{p}=.001$). Value for school achievement, as the third predictor, further increases the multiple $\underline{r}$ to .65 ($\underline{F}(3,54)=12.96$, $\underline{p}=.001$).

Loevinger (1970) has reported a correlation of .58 between the TPR scores and word counts. Because increments from time 1 to 2 might simply reflect, for the MD mothers especially, increments in word fluency, the relationship between Word Counts and the LOEV scores at times 1 and 2 were examined. For this analysis, all words used by complete data respondents to the LOEV 1 and LOEV 2 scales were individually counted. The words "a" and "the" were excluded from this count.

Correlations between Word Counts 1,2 and LOEV 1,2 scores are significant (.39-.52, $\underline{p} \leq .01$). In addition, the multivariate $\underline{F}$ for testing for program effects on LOEV 2 and Word Count 2 is 4.98 ($\underline{p}=.001$). However, the univariate $\underline{F}$ for program effect on Word Count 2 is not significant ($\underline{F}(2,55)=2.12$, $\underline{p} > .05$), suggesting that the programs are not significantly increasing verbal fluency over time. Conversely, the univariate $\underline{F}$ for group effect on LOEV 2, with the effects of Word Count 2 eliminated, is 8.16 (p=.0001). Effects on LOEV 2 scores are not simply obtained because of increased word fluency as a result of participation in the programs. Rather, qualitative change in the organization and construction of many women's personal experiences seems to have occurred. This is particularly true of MD group women, generally, and women in both the MD and TD programs at site A.

The Inventory of Expressed Social Values was administered only at time 2 because it was developed during the course of the research. Its development and use is discussed in another paper (Slaughter & Walcer, 1980). Results with the intervention study groups will be briefly presented.

Main effects for groups ($F(2,54)=7.329$, $p=.002$) and for sites ($F(2,54)=3.928$, $p=.026$), but no interactions, are evident in two-way analyses of variance. The means for the MD (N=19), TD (N=22), and control (N=23) groups are, respectively, 4.26 (SD=1.45), 5.23 (SD=0.97), and 5.91 (SD=1.31), where a low score equals high modernity. Differences between the MD ($p<.01$) and the TD ($p<.05$) groups from controls are significant in the predicted direction. The six intervenors were also administered this scale. They average 3.50 (SD=2.07), while a criterion group of similar women (N=67) pursuing the high school equivalency degree at a local community college average 3.78 (SD=2.00).

However, the K-R 20 reliability coefficient for this instrument is very low. Because only criterion validity could be established with it, no precise meaning can be attached to higher or lower scores. The data are primarily supportive of other findings which document the evident superiority of the MD group to other groups at the conclusion of the study.

In summary, differences were predicted favoring program groups over controls at the study's conclusion on measures of childrearing attitudes, personality, and expressed social values. These predictions are especially true for the MD group, on one (of three) measure of childrearing attitudes (Maternal Individuation scale), one (of three) measure of personality (Loevinger Ego Development scale), and a new measure of expressed social values (Modernity scale). Furthermore, childrearing attitudes do not differ significantly at time 2, but at time 1. Groups are initially equated at time 1 on the measure of value for school achievement (administered only at time 1), and at time 2 on a measure of self esteem (administered only at time 2). Both measures are derived from ratings of open-ended interview data. Finally, there is some evidence that control mothers, by time 2, had spontaneously benefited from perceiving themselves to be part of an ongoing study.

A portrait of the discussion group dyads.

The results obtained from specific measurements have been emphasized. To conclude the results obtained should be portrayed more wholistically, thus addressing the question of how discussion group dyads seem to be more or less different from other dyads at the end of the study.

First, children in these dyads do more talking during the last play session than other children. That is, they are more spontaneously verbal during the course of their ongoing exploration and grouping of toys. It is likely, but not definite, that much of this verbalization is specifically directed towards their mothers. Second, children in these dyads are more verbal in responses to unfamiliar adults in a demand situation, especially by comparison to control children. They may seem to have more verbal concepts available, because they more often use them upon request in testing situations.

However, children in this group are no different from others in the time they expend in nonplay activities or the formal structuring of their play with objects. They are no more likely than the other children to explore, classify, or imitate other characteristics of human or nonhuman objects. They are also no more likely to pretend in their play activities. They are no more likely to discriminate one object from four objects presented in a two-dimensional pictorial format when requested, and they are no better on a variety of other assessed quantitative, memory, and motor skills.

Mothers of these children more often contact them during their play, and these contacts appear to assume a teaching function. The mothers typically elaborate upon the children's ongoing activities and less frequently, specifically demonstrate and/or tell the children how to use an object which interests them. Mothers in all three study groups, however, appear equally supportive of their children. This support could range from watching during the child's play to actively facilitating or encouraging the child's efforts as, for example, pushing toys toward him or her and/or smiling at him or her.

Mothers in the three groups rarely stop children from engaging in some activity and/or deflect their attention elsewhere. Additionally, children are rarely rebuked. Mothers also do not differ in the average amounts of time that they are completely uninvolved with their children.

Finally, all mothers are rarely seen to encourage children in the direction of a specific activity, perhaps because most children in the play session at least initially gravitate toward the toys. Mothers differ in how they respond to the initiatives of the children towards these toys, and themselves.

In reports of their general approach to childrearing, discussion group mothers, more often than other mothers at the end of the first study year, state they: (a) are satisfied with the child's efforts to become more independent with increasing age; (b) keep a regular schedule for the child; (c) plan to teach the child about his or her race, (d) use primarily verbal, rather than physical, controls to handle instances of disobedience or challenges to authority, (e) think the child must possess guidelines or standards for coping in the adult world, as contrasted with emphasis on obedience as the primary strategy; and (f) describe the child in primarily positive, or at least neutral, terms. Finally, they are more likely to report warmth, understanding, consideration, and friendliness are important qualities for their children to develop.

However, other mothers are just as likely as discussion group mothers to report (a) assuming the child's point of view in situations where information has to be transmitted, and (b) explanations for their children's behaviors which consider the child's developmental (age) status.

Discussion group mothers, by comparison to others, organize their thinking about personal and social relationships in a more cognitively and socially complex way. Specifically, they are more apt to be characterized as in Loevinger's Stages Delta/3 and I-3 (Transition, Conformist), while others, especially control mothers, appear best characterized by Loevinger's Stage Delta (Self-Protective).

At stage Delta, the individual understands that there are rules, but they are observed in accordance with self interest or immediate expediency. Interpersonal relations are construed as exploitative and manipulative; preoccupation is with control and "getting in and out of trouble." At stage I-3, rules are observed just because they are rules. Interpersonal relations are perceived in terms of actions and events more so than in terms of feelings and motives. Concern is with status, reputation, appearances, and material advantages. If the socially adaptive aspects of both of these stages are emphasized, the fundamental distinction seems to be between an emphasis on self-defense, marginality, and interpersonal manipulation as strategies for survival, versus an emphasis on security, belongingness, reciprocity and social participation as strategies toward that same end.[6]

Finally, mothers in all study groups appear to equally value academic achievement for themselves and their children. However, discussion group mothers are more likely to report preferring to: (a) look toward the future rather than the past for personal guidance and directions; (b) use outsiders and external social institutions as resources to achieve valued ends, as much or more so than immediate kin and family; (c) establish a consensual, rather than unilateral, decision-making process in family life; (d) endorse personal risk-taking and merit, rather than security and familiarity, in the occupational arena; and (e) be optimistic that they are not alone in their struggle for survival. They are generally more likely to be more concerned about the active use of others toward meeting their personal objectives, than the control of the social initiatives of others toward them (Slaughter & Walcer, 1980).

Discussion

The parsimonious summary of results is that program dyads are found to be significantly different from controls. These differences are especially true for Discussion group program mothers and children. However, the findings are much more complex than this summary implies. The complexity arises because of (a) the patterning of psychometric test data across time, (b) the observational and interview variables on which program dyads do and do not differ from controls, and (c) the apparent comparability, and occasional superiority, of the results from the Discussion group program to the Toy Demonstration program.

Emergent intellectual functions.

Significant linear declines occur between average ages 22-41 months in both child test sequences, the Cattell-McCarthy and the PPVT 1-3. Program groups probably differ from controls on the McCarthy at time 3 because their mean scores did not decline as much. On this instrument, program groups retain an average IQ more characteristic of middle class children at the study's conclusion while controls slip to the average IQ most characteristic of their social status/racial group. Demonstration group children are superior to other children on the Verbal subscale of the McCarthy, but the Discussion group children have the higher overall McCarthy IQ. However, on the PPVT 3 all study groups score well below middle class averages, and mean differences between them are nonsignificant.

There are three results of the psychometric testing which contradict previous research and theorizing. First, as is true of most intervention researches emphasizing cognitive outcomes, IQ gains were predicted. In actuality, between ages 22 and 41 months IQ decrements were observed. In a developmental study with no intervention component, Golden and Birns (1968) observed a similar decline in average mental test performance among black infants from lower status backgrounds between ages 12 and 24 months. These data do not support the idea of initial deficits which require intensive therapeutic interventions. However, the data also do not imply that all such children are merely "culturally different" (Sroufe, 1970; Tulkin, 1972). Rather, the data suggest that such children may need additional supports in the form of human services during this age period if they are to continue to thrive and realize their genetic potentials.

Second, on the Cattell-McCarthy sequence these children are superior to existing norms for black infants. Golden and Birns (1968) found a Cattell mean IQ of 98.5 for black children of welfare families at age 24 months. Similar children of higher social status backgrounds had an average IQ of 99.7. The background of this sample is most similar to the black welfare sample, but at 22 months the mean Cattell is 111.6, and at 32 months it is 105.2. Similarly, while Kaufman and DiCuio report a mean McCarthy IQ of 88.7 (N=87) for children of black unskilled workers using the McCarthy standardization sample, the average McCarthy IQ in the present sample is 102.9 (N=57). This average is roughly equivalent to that reported by these authors for the black middle class standardization sample (IQ=101.0, N=65). Considering the three study groups, it is actually program groups at ages 32 and 41 months that, on average, are superior to the published norms. Controls perform more in accordance with the expectations of their status/racial group.

These findings probably reflect (a) the impact of the intervention programs, and (b) the success of the efforts made to evaluate children in familiar, comfortable surroundings.

Third, at each age level, Pearson correlations between the two IQ tests are only moderate. At the first assessment the correlation is .50 ($\underline{p} < .01$, $\underline{N} = 74$), at the second it is .39 ($\underline{p} < .01$, $\underline{N} = 73$), and at the third .41 ($\underline{p} < .01$, $\underline{N} = 63$). Approximately 16-25% of the variance between these two measures of intelligence is shared within this sample population during ages 2-3 1/2 years. Further, the strength of the correlations is of decreasing magnitude.

Lewis and others (1976) have discussed how infant intelligence appears to be neither highly stable nor unitary. Research indicates that the organization of intelligence is complex and rapidly changing in the first two years of life. It is particularly difficult to assess at these times. During the second year, and presumably continuing into the third, many important new discrete functions (e.g., language) emerge. The relationships of these functions to earlier ones are not completely understood, but from a measurement perspective they appear unstable and multidimensional, rather than stable and unitary. The negative findings with the PPVT, if they are contrasted with Cattell-McCarthy results, as well as the decreasing magnitude of correlation between the two test sequences over time, certainly support notions of diverging emergent intellectual abilities in infancy and early childhood. Any early intervention program must thus seek multiple confirming, or better still substitutive, criteria of effectiveness.

Language in context.

While Discussion group children are more verbally expressive during play and in the final testing situation than controls, Demonstration children are decidedly less expressive than either of the other groups during play, but more verbal than both of them during testing.

The findings with the McCarthy Verbal subscale confirm those of others (Clarke-Stewart & Apfel, 1978; Hall & Tirre, 1979; Kessen, 1975) that particular language usage is a critical factor in success on standard intelligence tests, and that early intervention programs can impact this usage. However, the content of the language used during the observations was not rated, and this may account for the finding of no observed differences between Demonstration and control group children in these play sessions.

Conversely, children in all groups show equivalent complexity in play structure, and low levels of imitative, pretend, or nonplay activities. All children explore and relate toys, but the use of speech during this activity varied among the groups.

During the observations, mothers in all groups spend little time in restrictive, or otherwise generally nonsupportive, behaviors. They also devote little time to explicitly guiding the child into play activities. However, only Discussion group mothers spend significantly more time (about 11+ minutes as contrasted with 9 or less of 18 observed minutes for the Demonstration and control groups) interacting with their children with the apparent goal of extending the children's play. This time is used not merely to support or instruct (e.g., identify items, show and tell) the child during play, but to make more of the child's ongoing play behavior. Some examples of this activity include:

a. The child places the toy canister on top of her head; as she stands in front of mother doing this, mother smiles, saying, "Oh, I see you are wearing a big top hat!"

b. The child is observed by the mother to be dialing the toy telephone.

She tells him to call his grandfather on the telephone, and when he does, she (mother) pretends to be the grandfather.

c. The child is observed to be placing blocks in two holes in the toy mailbox provided; he appears to ignore the possibility of using two other holes and the mother silently turns the mailbox around as if to call his attention to them.

d. The child begins to count blocks; as he continues, the mother pushes more blocks before him, in an effort to get him to count as far as he can. Alternatively, she may ask him about the different colors of the blocks.

In each of these examples, the mother elaborates upon the child's ongoing behaviors, bringing more to the context of the play than seemed to be part of the child's own experiencing of it. She does not label or identify objects for the child; rather, she encourages the child to generate his(her) own labels, and presumably, experiences with these objects. The statement of what an experience might be is left open-ended; the child has the option to make it something altogether different.

This analysis is somewhat discrepant from a recent report on Levenstein's research where program mothers (N=24) were observed to label more, and to use more action verbs, for example, than controls ("Building Concepts Through Verbal Interaction," 1979). Rather, this argument is that increments in absolute amount of verbalization in certain contexts, may increase the probability of display of certain verbal concepts. Further, the amount and quality of verbalization in any situational context may, in fact, be governed by social norms mutually, and informally, adhered to by children and parents.

A similar argument is offered by Harkness and Super (1977) who found that language socialization among Kokwet children did not emphasize verbal production vis-a-vis adults, often precisely what is required in the child testing situation.

This argument can be extended. Because the three study groups reveal three different language patterns on the three different assessments (observation, McCarthy, and PPVT) at the study's conclusion it is possible that there is much to learn about the diversity of language socialization in the home before any isomorphic mapping between the home and other situations can occur. More information is needed about the normative meanings as to how speech is to be used which are brought by children to outside home situations designed to assess communicative competence.

Program effects on mothers.

Differences between program and control mothers, as far as reported flexibility in childrearing attitudes, are evident at the end of the first, but not the second, year. Program mothers, especially Discussion group mothers, differ significantly from controls on observed behaviors, level of personality development, and expressed social values only at the end of the second year. In short, between group differences in reported childrearing attitudes precede changes in observed behaviors of mothers and children, and changes in maternal personal-social attitudes. They parallel emerging group differences in children's measured abilities.

Mothers in all groups are similar in their perceptions of their ability to influence schools and the educational process, their apparent value for school achievement, and their sense of self worth. They differ in openness to outsiders (persons other than relatives and friends), in their willingness to use external social institutions as resources, as well as in the extent to which they perceive such external groups to be personally beneficial. In these respects, Discussion group mothers are the most open at the study's conclusion.

Attitudinal and personality differences at $p = .01$ or better, relative to controls, favor Discussion group participants. Six of seven obtained differences in observed behaviors favor this group. The Discussion group program, since it involved no direct modeling of interactive play behaviors, was initially conceived as a conservative control in this research. Attitudinal differences favoring this group over others were expected, but not necessarily behavioral differences. However, this program had broad, extensive effects on dyads, while the Demonstration program seemed to have more situationally-specific effects on child behavior during performance testing.

The Discussion group - a new extended family?

How did the Discussion group program impact dyads? Narrative summaries of group process were made by the three leaders at each site. These narratives, as well as individual attendance records, were available for study. Leaders and participants were also interviewed about their groups. The findings will be briefly summarized and then interpreted. First, however, it is necessary to introduce the interpretative frame of reference by consideration of some contemporary ideas about linkages between social structure, adult personality, and child socialization.

DiRenzo (1977) observes that, with some important exceptions, because personality has been primarily characterized as a product of social interaction, there has not been a strong tradition in sociology of consideration of linkages between personal and social systems. Such a tradition would result in "synthetic" theories and concepts of personality because the mutually interactive influences of social and personality processes would be evident. He states that personality is more than role learning, and that it would be useful to substitute the concept humanization for socialization such that, while the latter concept would be restricted to analyses of the processes of social role learning, the former would include socialization as well as maturation, culturation (enculturation and acculturation), and personality development. He suggests, in agreement with Sanford (1970), that focus on structural, rather than content, personality variables such as, for example, those used in Adorno's study of The authoritarian personality is more likely to ultimately yield evidence of linkages between personal and social systems. DiRenzo also commends some recent research in adult socialization which demonstrates that experiences beyound childhood can significantly influence adult personality development.[8]

Three lines of research have sufficiently disentangled social structure and adult personality such that (a) their relationship could be observed, and (b) the potential import of this relationship for understanding parental socialization practices is evident. Kohn (1977) and his colleagues, for example, have demonstrated a persistent relationship between socioeconomic status and parental values. Parents of higher status backgrounds value self-direction or thinking for oneself; parents of lower status backgrounds value conformity to external authority. Kohn argues that these values derive from the parents' participation in the occupational structure: they are contingent upon how much self-direction is possible, relative to the "substantive complexity of the work" (Kohn, 1977, p. xxxv). Self-direction should not, according to Kohn, be confused with need for achievement:

> Our data suggest...that there is no relationship between social class and parental valuation of the child's 'trying hard to succeed.' I think that achievement motivation is at most a weak link from parental values to the social mobility of the child. I would look instead... to parental emphasis on self-direction or conformity to external authority (p. xxxiv).

Kohn observed that more research linking parental values and childrearing practices to children's behaviors is needed; this research would, presumably, begin with the establishment of probable causal linkages between social structure and parental values. However, that social structure need not be limited to social class is evident from a study by Olsen (cf. Kohn, 1977) who hypothesized and found that Taiwan mothers in three-generation households placed more emphasis on conformity than self-direction, by comparison to mothers in two generational households. Apparently, neither value orientations prior to marriage, nor specific valuations of the traditional Chinese ethic by these women substantially attenuated these findings.

Inkeles and his colleagues (1966, 1971) have concurrently studied the relationship between societal modernization or industrialization and individual "psychological modernity," as measured by Inkeles' OM-Scale. Suzman's (1974) correlational study of urban lower class Black American males and females showed a moderate relationship between educational and occupational attainment, the OM-Scale, and Loevinger's (1970) measure of ego development. Though, from Inkeles' perspective, the individual and the social systems are perceived to be in reciprocal interaction, the research trend has been to use psychological modernity as a dependent variable, with actual modernization experiences, such as education, presumed to be antecedent conditions. Consistently, Inkeles and his colleagues have found relationships between educational experiences and personal attributes which reflect flexibility and openness to new experiences and, in general, a preference for personal planning, directing, and organizing of one's own life. Inkeles believes that such a personal orientation is critical to competent adult role functioning in modern, especially urban, society. However, the notion of intraindividual modernity has not been directly related to parental attitudes and behaviors.

Bernstein and his colleagues (1971, 1973) have adopted the more traditional sociological perspective on adult personality since, in his social learning theory, adult behavior is characterized in terms of role functioning vis-a-vis one's location in the social class structure. However, he has tried to establish causal linkages between adult roles in that structure and children's social learning, both of which are perceived to be mediated through the speech acts of the adults and children.

Specifically, for Bernstein, a role is an enactment of a social identity whose manifestations are evident in the sociolinguistic principles by which the individual encodes and decodes social experiences. Differential participation in the occupational structure and associated value differences determine the principles regulating (i.e., the code) the adult's enactment of the parental role because the nature of extra-familial participation in the work force governs the adult's preferred patterns of decision-making and control vis-a-vis the child. The restricted code requires less explicit verbal elaboration of meaning because control is inherent to the status of both speaker and listener within the family and community group, whereas in the elaborated code, control must be negotiated through attention by the speaker to the unique, individuated characteristics and intent of the listener. Families whose orientation toward control is personal have access to the restricted code, but are more likely to use the elaborated code as a principle of framing speech acts. Families whose orientation is positional, are more likely to use only a restricted code. Bernstein believes that the elaborated code is more typical of middle than lower class adults and children, particularly if they are confronted with novel experiences to which meaning must be imputed. The speech act is, therefore, both a function of the social structure, and the process by which the culture of that structure is transmitted.

Implicit in the theorizing of Kohn, Inkeles, and Bernstein is the idea that the social understandings of the parent will govern selection of socialization attitudes and behaviors. The understandings are both cognitive and affective, and they develop from social experiences. A major factor seems to be the parent's preferred style of understanding, whether, for whatever reasons, the personal system is differentiated, flexible and open, self-defining, and relatively context-independent, or instead, undifferentiated, closed, other-oriented, and relatively context-dependent. In her emphasis on the importance of the parent's definition of a situation, Cook (1973) suggests why such variability may be so important:

> the literature on child-rearing often assumes that parents and children have only a pedagogical intent in pursuing their daily lives. This gives a rather distorted view of the socialization process. The activity of childrearing does not consist only in following the rules, but also in making the rules fit the activity already performed or decided upon. The need in socialization research is to look for these organizing principles as the parents define them and as the child perceives them. It is possible that what the child acquires from the parent are these general principles which he can use to generate his own behavior (p. 318).

In this study, the Discussion groups become structural vehicles for new social experiences for mothers. New ways of defining parenting goals can occur in such contexts, and the requisite supports for their implementation and maintenance are available. Importantly, it is probably ultimately the sharing of experiences about one's social relationships that serves as the catalyst for adult personality development and change. Data on the processes of group formation were examined to ascertain (a) how individual commitments to groups evolved, and (b) what impact the content of the groups' discussions--children and family life--had on the group process itself and thus, on the personality processes of the individual women involved.

Commitment to the groups, according to its leaders (staff of United Charities of Chicago), implied commitment to a process of self-disclosure. If such disclosures occur, then individual members can get support, and new insights for themselves. As a result, they will perceive their group to be personally beneficial. To benefit, the individual member must be physically present, have the requisite psychological energy and skills to share, and perceive that such voluntary sharing will be responded to empathetically and constructively by the other group members. The group leaders believed they had to create a nonthreatening, supportive group atmosphere if members were to ever experience the group process as pleasurable.

Leaders and mothers, at the end of the first study year, both corroborated how difficult it had been to boost and sustain attendance. In the first third of the year, group attendance rates typically averaged between 31-58% (median=53%) per meetings held. In contrast, attendance rates averaged between 49-87% (median=73%) in the first third of the second year. The figures are adjusted by group at each site, relative to the numbers of participants eligible to attend during that period. These participants had not clearly attrited and had been with the program since its onset.

The group leaders took major responsibility for planning all but the most obvious educational or social (e.g., Christmas) activities in the first half of the first year. They also focused on development of the group conversational (e.g., turn-taking) and observational (e.g., getting mothers to note and relate how the toddlers responded to an activity tried at home that had been leader-suggested) skills of members. At the earliest signs of member bonding toward themselves, they attempted to redirect these feelings into the group as well so as to stimulate verbal communication and sharing between members. The groups whose attendance rates increased the most sharply between the first and second years were composed of a predominance of members who had been present from the outset. These groups were contrasted with those that were equally balanced with newer, nonrandomly selected members recruited either by agency staff or other group members to fill attrited slots. The narrative logs suggested that older members may have enjoyed being able to share information, resources, etc., with the newer ones who, in turn, were also catalysts for new conversation, insights, without simultaneously disrupting earlier continuities.

By the end of the first year, members generally had made commitments to each other. They reported that they returned in the second year because they were still interested, wanted to be present, and had a concern for the other members. By this point, typically, the leaders were also perceived to be "one of the group." More executive action and planning was done by each group as a whole, rather than the group leader, in the second year.

The primary focus of discussion between the first and second year shifted from parent-child emphases to a more personal emphasis. Narrative logs indicate that initial disclosures were around parenting concerns, stimulated by comparing notes on mutually agreed upon "educational" activities engaged in with children at home. Later disclosures had more to do with personal concerns related to being mother, wife or mate, friend, neighbor, community resident and the like. This emphasis was especially characteristic of the second year.

In summary, during the first year, commitment to the discussion groups was established; individual attendance rates increased between the first and second half of the year. Initially, commitment was established to each group leader. Leaders were perceived as knowledgeable, warm, accepting, and friendly, but firm and dedicated. Mothers established a bond with each other partly because of shared group experiences: they experimented with leader-suggested activities with their children at home, and they talked about their successes and failures with each other. They also shared how they felt after observing the direct results of their own efforts to "teach" their children. Commitment of the members to each other evolved from discussions of newly shared experiences with their children outside of group meetings. In the second year, members used each other as personal and social resources. Groups became "mini-families" in which personal and familial triumphs and problems were shared; specific focus on the children diminished. In both years, members pursued activities which included resources and contacts with the broader community. However, these activities were increasingly generated and planned by members, rather than group leaders, for themselves.

The important point, relative to the earlier discussion of the relationship between social and personal systems is that a new form of social participation was ultimately established by the mothers themselves toward a common task-oriented goal: effective childrearing. This social alternative permitted the sharing of some of their most intimate concerns about personal, child and family life.[9] The group operated outside of existing social structural influences, as mediated by relatives, current friends, and neighbors, but ultimately endured because its content had exceptionally high salience for each member: the development of her child. Mothers' increased social understanding of how they could influence their children's behavior and development may have impacted their own personal development, as well as their behavioral styles with their children. The particular receptivity of Discussion group mothers may be partly a function of the modal family structure of its members: attenuated nuclear family. In effect, other, potentially competing, adult influences were minimized. The content of the resultant changes in mothers and children was consistent with the "middle class" orientation of the programs and intervenors.

This study has not directly considered the question of whether there is a traditional lower class black culture; it has simply assumed that there is.

Changes in mothers were perceived as shifts toward the dominant middle class one, as a result of initial receptivity to the influence of outsiders. The rapidity of the changes in mothers and children mitigates against any notions of (a) extensive pathology in that culture, and (b) pervasive threat to that culture from apparent modernization of childrearing attitudes and practices. Obviously, however, the longer-term educability of the child is dependent upon the full acceptance of the child and its family by educational institutions.

The apparent intrapersonal structural changes in how Discussion group participants thought about social relationships indicate that the findings do not simply reflect change in degree of social isolation due to the introduction of new social supports. Rather, the participants also achieved an increased cognizance of how these social relationships could be used to personally benefit themselves. Simply put, they related differently to their children because they perceived that it would make a difference in ways that were important to them. The fact that mothers could change, and that parallel changes could be observed in children, given so minimal an input, attests to the mothers' basic resiliencies and competencies.

In summary, a change in the social reality of mothers, effected changes in personality processes and parenting styles. Since the content of this reality was decidedly middle class in orientation, it is not surprising that the content of observed changes also reflects these biases. There is ample support for assuming linkages beween social and personal systems, social systems and parenting styles and child behaviors. However, linkages between the personal system and parenting styles may be even more complex than the other linkages are known to be. In this study, changes in mothers' personal systems parallel, but do not clearly precede, changes in parenting styles or in children. In fact, there is some hint that shifts in childrearing attitudes precede all other changes.

Studies which assess the impact of becoming a parent, as well as parenting at a given period in the child's development, for adult development are much needed.

Some immediate policy implications.

While apparently for quite different reasons, the numbers of black and white single parent families are increasing in American society. Among black Americans, especially, there has been an increase in the numbers of black families headed by women between 1969 to 1978, from 29% to approximately 39% (Williams, 1980). While white women were divorcing or separating twice as much (121%) as black women (65%) in 1978, by comparison to 1969, the increase in the numbers of families headed by single parents was five times greater for blacks (257%) than for whites (57%). The rise in the number of black families headed by women accounts for virtually all of the absolute number increases (proportionally, the percentage of poor families decreased from 53 to 51% among blacks) in poor black families over the decade 1969-78, despite the fact that the majority of such families (68%) depend upon earnings, rather than welfare. White women, generally, have shown an increase (2%) in numbers of out-of-wedlock births, while black women have declined (by 7%). However, the rates of teenage (ages 15-19) pregnancy among black women are more than six times higher than those of white women (90.6-93.3 per 1000 live births for blacks, 10.0-13.6 per 1000 births for whites). There is every reason to expect these trends to continue and to significantly effect an increased demand for child care services and related resources.

Single parent families need not be weak families, but they are initially least likely to be self sufficient and resistant to extrafamilial adversities, by comparison to families where the caregiving of children is shared by two or more adults. Because these families are frequently vulnerable to reduced support services for child caregiving, our results are important. They suggest that socially engineered self-help networks, as well as spontaneously generated ones

(Stack, 1974), can positively impact them. The networks enable (a) women to clarify their personal, familial, and childrearing goals, and thereby feel better about themselves, and (b) children to receive increased amounts of social and linguistic stimulation from a primary attachment source. For the younger, teenage parent such networks can also serve informational purposes and thereby supplement available home instruction from other kinfolk. In our view, such networks need not be confined to the child's natural parent(s). The persons who actually do the caregiving should participate, whether they be immediate blood relatives, neighbors, friends, and/or individuals who operate family day care homes. The networks can ensure that the children receive quality caregiving during the first three years of life without unduly threatening the providers of this care. If optimal early parenting is an important as I think it it is, then the personal futures of these children, as well as their caregivers, in a very real sense depend partly upon the feasibility of this latter proposition.

Appendix A

Coding Manual for Selected Maternal Interview Data

The purpose of this Appendix is to describe the interview rating scales used as measures of the six maternal interview variables reported on in this study.

1. Maternal Indivduation
2. Developmental Explanations for Child Behaviors
3. Teaching Perspectives
4. Self Esteem
5. Personal Control
6. Value for School Achievement

Maternal individuation, Self esteem, and Value for school achievement were measured similarly. Essentially, the indicators presumed associated with a particular variable are delineated and the presence (+) or absence (-) of each of these is tested. The final rating is the sum of the "plus" indicators. This method of measurement has several advantages. First, it circumvents the problem of delineating distinct typologies for each choice point on a hypothetical "scale" which is difficult to rate reliably. Value judgments which often enter into a "high-low" continuum are thus minimized, while the advantages of a more clinical assessment are retained. Second, it permits item analysis of any particular index for each variable, while simultaneously allowing computation of the global rating. Finally, each variable is still scaled on a seven point scale for the best computational purposes.

In this study, we tried to relate each of the indices directly to the particular variable being measured, instead of requesting the reader to make the inferential jump. We have also been careful to specify the particular item(s) from which the information for the rating is to be derived. One of the major limitations of this procedure is that each indicator is given equivalent weight toward the final measure, a procedure which may not be justifiable in some instances. Similarly, the list of indicators for any particular variable may not be exhaustive.

The unit of information for these indicators will be the response by the interviewee to any one question. Each question is envisioned as a *stimulus*, and the corresponding answer is the *response to the stimulus*. Every question-answer is a unit, distinct from every other question and answer. The response will have, therefore, a particular content of information, and a particular style or form of presentation which includes choice of words, and the resultant tone and structure *according to the demands of the stimulus*.

Many indicators have face validity. The questionnaire items used to evaluate each indicator will be presented. Coding addenda and sample responses are presented after the items. Generally, whether a particular indicator is coded plus (+) or minus (-) depends upon the summative total of pluses and minuses of questionnaire responses, *and* the priority level of any given questionnaire item for that indicator.

Developmental explanations, Teaching perspectives, and Personal control are coded on continuous, additive scales. These scales do not attempt to integrate widely divergent data. Rather, they focus on specific topical issues which are more easily evaluated on a linear continuum. The Personal Control Scale was used and cross-validated in previous studies (Slaughter, 1969, 1970).

Maternal Individuation (MI)

This variable is defined as the degree of maternal acceptance of the role of teacher to the young child. This acceptance requires that the mother (a) see the child as a separate, distinct person, (b) who is continuously developing. She has a desired set of behavioral outcomes, and criteria for reaching these outcomes. She provides the necessary experiences for achieving her goals, and firmly, but warmly, engages the child toward these ends.

In earlier studies this variable was coded as three distinct variables: Concepts used by the mother, Individuation of child personality, and Cognitive controls used with the child. Principal component analyses revealed that Factor I of seven maternal interview scales consisted of the last two, and another, Warmth toward the child, in the following order of importance: (a) Warmth toward the child, (b) Cognitive controls used with the child, and (c) Individuation of child personality. For this study, we determined those Indicators in each scale which most consistently predicted the results of the total scale, and incorporated these into one scale.

Indicators	Questionnaire Items
(1) The mother sees her child as quite capable of being very independent, as indicated by her pleasure in seeing him do things for himself versus The mother sees her child's behavior primarily	When do you feel (child's name) will be old enough to make friends with and play with other children completely on his/her own? (01 Item 32d; 02 Item 13a) 02 ONLY: What makes you feel this way?

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in terms of whether it pleases or displeases her, rather than in terms of his own growth.

(2) There is an indication that the mother keeps a regular schedule for this child, that she is careful as to who cares for him in her absence, and that possibly she gives him special care and attention, versus
There is no indication that the mother has a special schedule for her child, gives him special attention, or has a definite caregiver for him in her absence.

Think about the last time (child's name) did something that pleased you a great deal. Name it.
(01 Item 25a; 02 Item 11a)
Think about the last time (child's name) did something that really made you angry. Name it.
(01 Item 26a; 02 Item 12a)
01 ONLY: How does (name of secondary caregiver) help you with your child during each day? (Probe for periods of time, content of help, perception of quality of help.)
01 ONLY: Who in the family, besides yourself, spends time with your child, helping him/her to learn new things? (Probe: Does (name of secondary caregiver) help him/her to learn things? What kinds of things do they show and tell (child's name) about?)
02 ONLY: Last year you mentioned that (name of secondary caregiver) was the person who, next to yourself, gives the most care to your child. Is this still the same person?

Yes ( ) No, someone else ( ) No, no one now ( )

(INTERVIEWER: If respondent answers "no, someone else" identify the person by relation to the child, sex, approximate age, and find out how much time is given any typical week by comparison to herself.)

02 ONLY: Can you depend upon (name of secondary caregiver) to always help you?

Yes, always ( ) Yes, usually ( ) No, it depends ( )

(INTERVIEWER: If respondent answers "Yes, usually" or "No, it depends," ask what help from this person usually depends upon.)

02 ONLY: In every family there are some disagreements about how to raise children and what is best for them in the long run. Name two things that you and (name of secondary caregiver) don't agree on in regard to (child's name).

(INTERVIEWER: Ask for two recent examples.)

02 ONLY: Name two things that you and (name of secondary caregiver) completely agree on.

02 ONLY: Generally, would you say that you are (a) Very satisfied, (b) Satisfied, (c) Mildly satisfied, (d) Rathe unsatisfied, or (e) Very unsatisfied, with how (name of

(3) The mother reports being an agent in her child's awareness of his own physical color and/or ethnicity, or that she plans to be when he is older, versus

The mother reports that she has not, and/or will not be an active agent in discussing this with her child when he is older.

(4) The mother reports using primarily verbal controls to punish, and possibly reward, her child, versus

The mother reports using primarily physical controls to punish, and possibly reward, her child.

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secondary caregiver) helps you with your child?

Very satisfied ( ) Satisfied ( ) Mildly satisfied ( )

Rather unsatisfied ( ) Very unsatisfied ( )

01 ONLY: Do you think (child's name) will have any problems in school because he/she is a black American?

Yes, many ( ) Yes, a few ( ) Don't know ( ) No ( )

IF APPLICABLE: What problems do you anticipate?

02 ONLY: Does your child recognize color differences between people now? (02 Item 18a)

Yes ( ) Don't know ( ) No ( )

(INTERVIEWER: Ask either 18b or 18c first, after 18a, depending upon the answer to 18a.)

IF APPLICABLE ("Yes" to above question 18a): How did you find out that he/she does? (02 Item 18b)

Do you plan to tell (child's name) that he's/she's black when he's/she's older, or do you feel it is better to wait until the situation presents itself? (02 Item 18c)

Did you do anything at the time to show him/her that you were very pleased? (01 Item 25b; 02 Item 11b)

Yes ( ) Don't remember ( ) No ( )

IF APPLICABLE: What did you do, and how did (child's name) react to what you did? (01 Item 25c; 02 Item 11c)

Did you do anything at the time to let him/her know that you were angry? (01 Item 26b, 02 Item 12b)

Yes ( ) Don't remember ( ) No ( )

IF APPLICABLE: What did you do, and how did (child's name) react to what you did? (01 Item 26c; 02 Item 12c)

Here are a series of situations which may have happened to you and (child's name) in the past six months. Tell me how you have handled them, or how you would handle them if they did happen.

Your child refuses to eat all his/her dinner, even though you know he/she is not sick. (01 Item 34a; 02 Item 16a)

You tell your child not to go too far away from you when the two of you are in the grocery store; he/she runs away toward the checkout counter. (01 Item 34b; 02 Item 16b)

You tell your child it is bedtime; he/she whines that he/she wants to stay up with you. (01 Item 34c; 02 Item 16c)

Your child pushes a friend's child down on the floor in front of you. (01 Item 34d; 02 Item 16d)

(5) The mother emphasizes the importance of developing specific guidelines by her child for coping with problems in order to get by in the world, versus

You refuse to buy your child candy or a toy, and he/she tells you he/she doesn/t like you. (01 Item 34e; 02 Item 16e)

When you do have to punish your child, which of these are you most likely to do? (01 Item 35a; 02 Item 17a)

1. Take away some treat you know he/she enjoys.
2. Put him/her to bed.
3. Put him/her in a room by him/herself for a while.
4. Give him/her a good spanking.
5. Tell him/her that he/she should be ashamed of him/herself.
6. Give him/her one good slap.
7. Tell him/her that you don't love him/her when he/she acts like that.

Which one of the above are you least likely to do? (01 Item 35b; 02 Item 17b)

In general, what do you feel your child needs to know in order to be able to get along in this world? (01 Item 27a; 02 Item 9)

The mother emphasizes only obedience or passivity as a mode of getting along in the world, such as being nice to people, or having good manners.	
(6) The mother reports that she believes warmth, understanding, consideration, friendliness are important qualities for her child to develop as a person, versus The mother reports qualities she wants her child to develop, but these are not among them.	In general, what do you feel your child needs to know in order to be able to get along in this world? (01 Item 27a; 02 Item 9)
(7) The mother describes her child primarily using positive adjectives, versus The mother is likely to use negative, or neutral, adjectives in her descriptions of her child, even when her intent is to praise him. She may simply praise him by virtue of the absence of some problem behavior.	If you had to describe (child's name) to someone who didn't know him/her, what would you say? (Probe: How would you identify your child so that this person could pick him/her out from a group of children the same age? 02 YEAR PROBE: What kind of person is he/she?) (01 Item 21a; 02 Item 10a) What of all his/her qualities do you like best about your child now? (01 Item 21d; 02 Item 10b)

02 YEAR ONLY: How does (child's name) differ from his/her other brothers and sisters? (Or "Other children" if this is an only child.)

02 YEAR ONLY: How does he/she differ from other children in this community?

Coding Addenda to MI Scale by Indicators 1-7:

Indicator 1. Code plus (+) if mother explicitly or implicitly acknowledges the child's freedom to grow, to make mistakes.

Indicator 2. Identify the secondary caregiver's age. If some adult (over age 18) person shares caregiving responsibilities for this child with the mother, code (+), if not, code (-). FOR 02 YEAR CODING: If the mother has a plus (+) code for Item 6a, then code (+), unless 6b-6e are coded minus. If any of these items are coded minus (-), code minus for the indicator.

Code plus for Item 6b if mother answers Yes, always/Yes, usually; minus if No, it depends.

Code plus for Items 6c-d if mother answers with a pattern of clear agreements and disagreements. Code minus if mother does not make this distinction.

Code plus for Item 6e if mother answers Very satisfied or Satisfied, minus if not.

Indicator 3. 01 ONLY: For Item 17b, code plus if mother answers Yes, many or Yes, a few, minus if Don't know or No.

02 ONLY: For Item 18a, routinely code plus if mother answers Yes, minus if Don't know or No. However, below there is an example where mother answered Yes to 18a, but because of her response

to 18c, is coded minus for Indicator 3.

Indicator 4. At these young ages many controls used by mothers are physical, rather than verbal. The real differences appear to be between physical removal of the child from a situation and/or letting his will prevail in a conflict situation versus direct punishment, usually physical, with no thought of the child's perspective. For a plus rating on this indicator, mothers needed five of the six situations rated plus (Items 26c, 34a-34e at Time 01; items 12c, 16a-16e at Time 02). Other questions are supplementary information for this indicator.

Code minus for Items 25b-26b (Time 01) or Items 11b-12b (Time 02) if Don't remember or No is checked. Code minus for Items 35a (Time 01) or 17a (Time 02) if spanking and/or deliberate isolation are given top priority.

Indicators 5 and 6. Generally, for Indicator 5, mention of independence, self-reliance, self-control or self-discipline is coded plus. Emphasis on education is coded plus.

Generally, for Indicator 6, emphasis upon poise, per se, is coded minus. For example, "have good manners," "how to meet and associate with people" is coded minus, but "how to get along with people" or "how to treat people" is coded plus.

Indicator 7. If adjectives or adjectival phrases are neutral, code minus. Code minus if mother emphasizes things the child does, rather than how he is as a person, and what he does is somewhat neutral in tone. Look for references to child throughout the interview if the information in the chosen items is insufficient to make a judgment.

Plus Coding for Indicator 1

Items 32d, 13a. In August when she is two.

Items 25a, 11a. She tried to come downstairs on her own.

Items 26a, 12a. She messed on herself.

Items 32d, 13a. She does that now.

Items 25a, 11a. She did some funny things when we were observed on the television (Family Development Program observation).

Items 26a, 12a. When I was sleep her mother told her to get some water to put on my face and she let the water run all over the floor.

Minus Coding for Indicator 1

Items 32a, 13a. Don't know.

Items 25a, 11a. I can't think of a thing. I can't remember.

Items 26a, 12a. She broke something.

Items 32d, 13a. About five--because the other children did it at that age.

Items 25a, 11a. I had some ice cream cones on the floor and I asked him "What you doing with that on the floor." He got the broom and swept it up.

Items 26a, 12a. Jumping from the couch to the cocktail table.

Plus Coding for Indicator 3

Minus Coding for Indicator 3

Indicator (3) could not be applied to such young children at the 01 year interview. The 01 questions were substitutes in which the more "individuating" mother was expected to acknowledge anticipation of racial problems in school.

02 ONLY:

Item 18a. Yes

Item 18b. He just say this is white and this one is black in books.

Item 18a. No

Item 18c. I think it's better to tell her around five or six years old.

Item 18c. I tell him, but I don't think he understands yet, but I keep on telling him.

Item 18a. Yes.

Item 18b. I'm not sure.

Item 18c. He'll learn on his own, but I be telling him.

Item 18a. Yes

Item 18b. When we went downtown he said all the ones that don't look like us are white and we are black.

Item 18c. He knows now.

Plus Coding for Indicator 4

Plus (+) or minus (-) given after each statement

Item 26c. Gave him a spanking and brought him in the house. (-)

Item 34a. Let him get down--don't believe in forcing him to eat. (+)

Item 34b. Usually go and get him--and keep an eye on him. He usually runs to bubble gum machine and plays with doors--once in a while, I spank him. (+)

Item 18a. Yes.

Item 18b. He often says J. is white because he is real light and when he sees white kids he calls them white.

Item 18c. I'll let him find out by himself. If he don't ask, I won't tell him.

Item 18a. Don't know.

Item 18c. I think I'll just wait until it comes up.

Minus Coding for Indicator 4

Plus (+) or minus (-) given after each statement.

Item 26c. I spanked her. She go get on the pot now. (-)

Item 34a. I'd make her eat (x) feed it to her. (-)

Item 34b. I'd spank her. (-)

Item 34c. Take her up there and put her in the bed. (+)

Item 34d. I'd pick her up and make L. apologize. (+)

Item 34e. Make her take a nap. (-)

Item 12c. I told him he might hurt himself--hit him on the hand and he cried and went to J. to pet him. (+)

Item 16a. Nothing--when he gets hungry, he'll come back and get it. (+)

Item 16b. Catch up with him and spank whatever I get to first. (-)

Item 16c. I let him sit on up with me, cause he's a night owl and wouldn't go to sleep anyway. (+)

Item 16d. Tell him that's not nice and he don't do that if its the first time, but if he does it again, I don't try to reason with him. I spank him. (+)

Item 16e. "That's all right, but I still like you." (+)

Item 12c. I whipped him and made him go to bed. (-)

Item 16a. Put the plate back on the stove. (+)

Item 16b. Wait until we get home and then get him--whip him. (-)

Item 16c. Make him go to bed anyway. (-)

Item 16d. Spank him. (-)

Item 16e. Tell him, "I don't care." (-)

Plus and Minus Indicators 5 and 6

***Both 5 and 6 are plus; **only indicator 5 is plus; * only indicator 6 is plus; #neither 5 nor 6 are plus.

Items 27a, 9. That the world doesn't owe him anything, and he's got to give to get something.**

Items 27a, 9. Responsibility and how to deal with situations that come up. How to get along with other people. How to push hard for what they want and not give up easily. ***

Item 27a, 9. Good behavior, good manners, and an education. **

Items 27a, 9. Life is not quite a bed of roses--if you fall down you don't have to wallow in it. Needs self-discipline--don't have hate in your heart, learn to love. Have to earn things you want--no one gives you anything, must work. ***

Items 27a, 9. How to get along with people. period. And that she can't be selfish. She has to learn to respect adults and learn their manners. ***

Items 27a, 9. How to be courteous, respect adults and listen to what people are telling her. *

Items 27a, 9. There's a lot of hatred in the world. #

Plus Coding for Indicator 7

Item 21a. He's mischievous, he's kind of smart, he's spoiled, and he's very affectionate.

Item 21d. His independence.

Item 21a. She talks so much--she'd tell them her name. She'd be in some devilment--doing funny things that would make the other kids laugh. She's not shame-faced and is not scared of anybody.

Item 21d. When I tell her something she listens and tries to do whatever I tell her. She's very easy to teach.

Items 27a, 9. She has to first know herself. She has to know how to understand people's feelings. *

Items 27a, 9. He doesn't like taking orders--if he can conquer that, he will be all right. #

Minus Coding for Indicator 7

Item 21a. A very active child and he loves to be nosy. (x) No.

Item 21d. He's not spoiled and he don't cry all the time.

Item 21a. She would probably be the one standing in the corner with her hand in her mouth. She might play with some of them. When she gets too quiet, she's usually into something.

Item 21d. Everything about her.

Developmental Explanations for Child Behaviors (DE)

This variable is defined as the degree to which the mother offers developmentally oriented explanations of her child's behaviors when specifically asked to give the reasons or causes for behaviors. If mother acknowledges no child behavior change with age or offers situationally specific reasons for any observed changes, no credit is given. Each question below is scored once. The total score is raised by one point, for a maximum of five points.

1. How is (child's name) different today from when he/she was a baby? (If not mentioned, probe for feelings, reactions, personal qualities, etc.) (01 Item 21e; 02 Item 13c)
2. IF APPLICABLE: Why do you suppose he's/she's changed? (01 Item 21f; 02 Item 13d)
3. Do you feel that two year olds have to be treated differently from four year olds when they misbehave? (If "Yes," how or in what ways?) (01 Item 22c; 02 Item 14a)
4. Why do you feel that children play so much? (01 Item 29b; 02 Item 14c)

Coding Addenda to DE Scale by Questions 1-4:

Plus Coding

(1) She likes people, but it takes awhile to warm up to you. She will show off for you.

(1) She cooperates a lot and she's half and half pot trained; and she's trying to speak clearly, if you can't understand what she is saying, she'll point to it.

(1) He's more able to express his needs better; I would give him what I thought he needed; he's let

Minus Coding

(1) He hasn't changed--not really; he's not as stubborn as he used to be.

(1) I don't think he is different; he was real frisky and active then and he still is--he don't dry as much.

(1) He's walking now and he be in the way sometime when you're busy.

me know he's a person with his own needs.

(2) He's gotten older; he's not as demanding. He doesn't consume as much of my time; he's able to do what he wants to do.

(2) Don't know. Maybe because I'm trying to teach her, take up more time with her.

(2) He realizes different things and (has) come to know things. He knows how to get up and play all by himself.

(3) Yes. It depends on the maturity of the child. I think a 4 year old knows more than a 2 year old. In general, a 4 year old is more mature than a 2 year old because at 2 they are doing a lot of experimenting and testing out.

(3) Yes. Two year olds don't know as much. You must explain why things are wrong more often.

(4) A child-play is like his occupation. Since he's a child helplays; it's just like work.

(4) That's all they got to do. It's their way of growing up.

(2) NOT APPLICABLE n/a

(2) Because she's spoiled.

(2) Then he could lay up and be nosy; now he can get into things and be nosy.

(2) Because he realizes he can't win; I'm more stubborn than he is. I learned to reason with him better.

(3) No.

(3) No. Because when a child is 2 years old, he should know right from wrong.

(3) Yep, a 2 year old I don't punish, but a 4 year old I do punish--the 2 year old don't really know what punishment is.

(4) Because that is all they know.

(4) They have a lot of energy. The only thing they have to do is eat, sleep, and play.

(4) Something I never could figure out. I guess they get a kick out of playing.

Teaching Perspectives (TP)

This variable refers to the degree to which the mother acknowledges a role for herself as teacher of her child and when she is specifically asked about her teaching strategies, states that one must take the child's point of view in order to teach. Each question below is scored once. The total score is raised by one point, for a maximum of five points.

1. IF APPLICABLE: When did you start (reading to child)? Why did you start at that time? (01 Item 15c; 02 Item 19c)
2. What do you think the difference is between the teacher's job and the parent's job as far as helping children to learn? (Probe to determine whether mother sees roles as overlapping or separate and distinct.) (01 Item 15e; 02 Item 20a)
3. Do you agree or disagree with this saying? "Young children should be seen and not heard?" Why or why not? (01 Item 22d; 02 Item 14b)
4. What do you do now when (child's name) asks you a question you can't answer? (01 Item 34f; 02 Item 16f)

Coding Addenda to TP Scale by Questions 1-4:

Plus Coding	Minus Coding
(1) I noticed she started liking books around 2 years old, so I decided to buy books and read to her. I thought this would help her to be a good reader.	(1) NOT APPLICABLE n/a
	(1) When she got into the program. It was one of the requirements and as she got older, she began to understand more.

(1) This year. I had ordered some child craft books, I went through them and they had nursery rhymes in them so I read them to him and J.

(1) Since October 1974. Because Mrs. C. asked me about reading and I found out how much they could learn when read to.

(2) Parents should see to it that teacher's work is not lost. When child is at home for summer, parents should see to it that child doesn't forget what he's been taught. They should set aside 1/2 hour to read a book.

(2) To me, there shouldn't be too much of a difference. Up to a certain age, they need mothering from teacher; at about 6, they are still more or less in baby stage. At 7, they start to get more independent.

(2) A parent should get him to understand what work is about; maybe if he understands it more, it won't be so hard for him to work.

(1) About 12 months. I had the books coming here from a book club--so I had them here.

(2) The kids are more used to the parents than the teacher so they learn more from the teacher because they are expecting to learn from her.

(2) The teacher just do more than the parent because the parent don't know as much as the teacher.

(2) It's hard on the teachers because they have more, because they have to try to teach them all day. (x) She'll probably teach them how to sit in a circle, take them out, and how to be quiet.

(3) Disagree/Don't Know/Agree Sometimes

(3) Grown-up conversation yes, but not otherwise because my grandmother used to say that and she was wrong about a lot.

(3) Because sometimes they can tell you something important.

(3) Because they have a right to their opinion and to express their opinions. If they are not heard you stunt their growth and expression. If he says no, he has a right, but I have a right to ask why.

(4) I would tell him that I would try and find out the answer.

(4) I would see if someone else has the answer and then tell them.

(4) I wouldn't tell him a lie; I'd tell him the truth that I don't know, I'd tell him something.

(3) Agree

(3) I'd rather for you to see them, like for them to be quiet; at least you can get your work done.

(3) Cause somethings--they'll take advantage of. Sometimes children should not be seen or heard because they'll take advantage of you.

(4) Think about it.

(4) I'd explain it some way.

(4) I'd try to answer it the best way I could.

Self Esteem (SE)

This variable is defined as the mother's currently perceived and anticpated sources of personal gratification. Feelings of worthiness depend upon positive feedback and appraisal from significant others. However, these appraisals are contingent upon the mother's own energy and ability to invest in the persons, situations, and activities which potentially offer these positive appraisals. The Self Esteem Scale, therefore emphasizes both the idealized and actual investments of mothers in their ongoing lives and the lives of others. It is assumed that positive personal judgments of worthiness follow such investments.

Indicators	Questionnaire Items
(1) The mother, comparing herself to the previous two years, reports either new aspirations, or less social isolation, or more social activities with, and/or understanding of her children, versus The mother reports none of the above changes, as far as herself as a person. She has no perceived new aspirations, social contacts, or investments in her children.	First, think about yourself as a person before you became involved with the Family Development Programs. If you had had to describe yourself to someone who didn't know you then, what would you have said? (PROBE: How would you have identified yourself so that someone could have picked you out from a group of persons like yourself? Interviewer: If mother gives only a physical description, probe for her activities, interests, needs, and life goals at the time. (02 Item 1a) Now think about yourself as a person, as you are now. If you had to describe yourself to someone like myself who doesn't know you, what would you say? (Interviewer: if mother gives only a physical description, probe for her activities, interests, needs, and life goals at this time.) (02 Item 1b)

(2) The mother reports the positives and negatives of her female kinswomen, typically admiring and/or seeking advice from one of them, versus

The mother reports only an idealized portrait of her female kinswomen. She typically does not seek advice from any of them, and may not report admiration of any of them.

(3) The mother's personal goals are aimed at personal enrichment and stimulation through travel, or a specific new career, in discussion of future plans, versus

The mother's goals are aimed primarily at personal security through a better education, new job, or other material advantages.

What woman do you admire most whom you personally would also like to be like? (02 Item 2a)

What is it about this woman that you especially admire? (02 Item 2b)

What black woman do you admire most whom you personally would also like to be like? (02 Item 2c)

What is it about this woman that you especially admire? (02 Item 2d)

What is it about your own mother, the woman who raised you, that you especially admire? (02 Item 2e)

What is the one thing about your own mother that you would least prefer to imitate? (02 Item 2f)

What woman that you know now do you most often seek advice from whenever you need it?

Name two things in life that you would like to do in the future more than anything else, that you have not done at this time. (02 Item 1c)

Considering your future plans, do these include plans for relocating your family to another city, town, or neighborhood? (02 Item 1d)

Yes, definitely ( ) Yes, maybe ( ) Don't know ( )
No ( )

(4) The mother reports time for herself, independent of fammly life, and that she does not feel she assumes major responsibilities in family support and/or child care that would best be shared by a companion,

versus

The mother reports little or no time for herself, independent of family life, and that she feels she assumes major responsibility in family support and/or child care.

Considering family life, what do you believe to be the responsibilities of the man who is head of the household? (02 Item 3a)

And what do you believe to be the responsibilities of the woman who is head of the household? (02 Item 3b)

Are there any responsibilities that you now assume for your family that you believe a man should assume? (02 Item 3c)

No ( ) Don't know ( ) Yes, some ( )

IF APPLICABLE ("Yes, some"): Give one or two examples.

If your family, as it exists now, had to continue for four days without you, what things that now get done, would not get done? Use Friday through Monday as the days you would be away. (02 Item 4)

During any given week, what things do you do for yourself as a person, which are not directly concerned with your role as female head of a household, or your role as mother? (Interviewer: If respondent answers "Nothing" ask her what she would like to do.) (02 Item 5)

(5) The mother anticipates that her role will change significantly according to each of the developmental phases of her child's life, thus implying a long-term perspective on the human life cycle, versus The mother does not anticipate significant changes in her own role in accordance with each identified phase in her child's development.	Considering your role as mother, as you now see it, what do you believe that role is when the child is young, for example, from birth to age five? (02 Item 7a) And what about when your child is older, between ages five to twelve? (02 Item 7b) What will be your role, as you see it, in relation to your child when he/she is between ages thirteen to nineteen? (02 Item 7c) What about after your child is over nineteen--what changes do you see in your role at that time? (02 Item 7d) Anticipating the future a bit, what do you think your role will be when this child has his/her own children? (02 Item 7e)
(6) The mother specifically indicates that she primarily punishes and rewards her child so that he will develop a set of values, and a sense of self respect, versus The mother indicates that she primarily punishes and rewards her child so that he will meet her own and others' expectations.	Generally, when you punish (child's name) for his/her behavior now, for what people in the future are you preparing him/her? (02 Item 8a) And when you reward (child's name) for his/her good behavior now, for what people in the future are you preparing him/her? (02 Item 8b)

(7) The mother emphasizes the importance of self-respect and responsibility associated with womanhood and motherhood. She implies that life can be positive if these factors are met, **versus** The mother emphasizes only the negative aspects to womanhood and motherhood, such as the need to protect and defend oneself and the burdens of child care.	As a woman, what is the best advice you can give a younger girl about womanhood? (02 Item 33) As a person, what is the best advice you can give a younger girl about being a woman? (02 Item 34)

Coding Addenda to SE Scale by Indicators 1-7:

Indicator 2. To code this indicator, first determine whether respondent identifies positive and negative aspects of her own mother (woman who reared her); then ascertain whether she seeks out kinswomen for advice. If so, this is a plus (+) coding; if not, give a minus code.

Code minus (-) if no kinswomen are mentioned in any evaluative manner.

Mother-in-law is considered to be a kinswoman, as are other relatives of husband's family.

Indicator 3. More social life is coded plus.

Indicator 4. If mother sees herself as a burdened sole provider for her family, code minus. Code No in response to Item 3c as plus (+), unless it is not associated with time for self, in response to Item 5. Do the same for Yes, some, unless a tone of being burdened comes through in response to Items 3c and 4.

Indicator 5. Code minus (-) if mother specifically indicates that she doesn't know to any of the items 7a-7e.

Indicator 6. Code minus if mother specifically indicates that she doesn't know to either Items 8a or 8b.

Indicator 7. Code minus if mother specifically indicates that she doesn't know to either Items 33 or 34.

Plus Coding for Indicator 1

Item 1a. I didn't like to meet too many people. Associate with too many people. I was pregnant up until then so there were no life goals.

Item 1b. I'm a nice person to get along with. I talk a lot. I like to go fishing and swimming, bike riding, playing cards. Some day (I want) to get a home of my own. I'm going to rest up this summer and then look for a job.

Item 1a. I wasn't patient--bike riding, a lot of picnics with family. Lost all goals. If you have 4 or 5 kids you have to raise kids. All of my life goals were shot at the time.

Item 1b. Have thoughts organized. Have a lots more patience; took horse back riding. I like music, skating, bowling, playing cards. Took up bible studies. I felt isolated before, now

Minus Coding for Indicator 1

Item 1a. I wasn't in anything before the program. I just worked around the house, that was it, and watched TV.

Item 1b. Nothing has changed, just work around the house and TV.

Item 1a. About the same, you know, no different. (x) I really can't say.

Item 1b. I'm a lady who would like to become a singer. My activities are involved in that--getting involved with the public. This is going to be a hard war. I'm on the board of directors at Miles Square School Community Activities. I attend school--trying to get a grant to go to music school.

Item 1a. I was a student; I really didn't have time for program, but I continued on because it was helping her. Wanted to complete high school, accounting in college; needed money, that's it.

I am much better.

Item 1a. Two years ago I couldn't cope with my children without screaming and hollering. My nerves were almost shot. I was interested in getting me a job and some clothes. With 11 children it is hard. I wanted to meet people and go places.

Item 1b. Now I have myself pretty much together. My children are finally under my control. I don't have any big urge of running in the streets. I am very content in my house. Being in program has taught me to put my ideas and perspectives in the right order. My nerves are much better; I am calm.

Item 1a. I didn't do nothing, downstairs in the playground is all I did. I didn't plan anything.

Item 1b. I have a lot of activities to do with A. now. I enjoy him more. I had planned on continuing this year; (now) I just want to settle down and get married.

Item 1b. Basically the same. I like to swim and play tennis.

Item 1a. Main activities were very limited two years ago, because I was very sick. Then (goal) was to be healthy because then I could do things. I wanted to finish school.

Item 1b. I'm still trying to get well. I dream a lot about being well. None right now (interests)...life goal still to finish school. Interests center around getting well.

Item 1a. Good person to get along. Sometimes emotionally upset. Kids should come first before parents; parents will always obtain something later. Mostly concerned with other people's problems, trying to help them out. I really don't have no activities; I had a good life (and) more cares than worries.

Item 1b. Very defensive of children; not too involved with others' problems. Trying to raise girls the best I can and I think I'm doing a pretty good job.

Item 1a. I was just a blob until I got involved in the program. I didn't want to do nothing. I thought I knew everything about children and all the time he was crying out for attention. I was just there.

Item 1b. My activities are great; I joined Advisory Board, joined social clubs and everything outside of the house. And I get along with the kids better because I sit and listen to them and talk but mostly listen now where before I thought I knew it all.

Plus Coding for Indicator 2

Item 2a. My mama.

Item 2b. Just a beautiful person. At 73 she's always trying to help people--I'm not saying that just cause she's my mother, because she do more for others than for me and have me out there humping too.

Item 2f. She thinks everybody should be perfect.

Item 2g. Sister or mama, whichever is handiest.

Minus Coding for Indicator 2

Item 2a. None.

Item 2e. Grandmother--she took care of me after my mother passed.

Item 2f. I don't know.

Item 2g. Aunt.

Item 2a. Nobody, just me.

Item 2b. Nothing, I don't want to be like nobody.

Item 2e. Nothing.

Item 2a. My mother.

Item 2b. She gets along with anybody; don't get into anyone's affairs; she's just nice all the way round.

Item 2f. Going to church every Sunday--she never miss going--nothing else about her; she never had a temper, never argues. They say I'm already like her.

Item 2g. My sister--no one else.

Item 2a. A cousin in Gary, Indiana.

Item 2b. She doesn't wait for things. Still in college--she's free to travel, not married. She works and goes to school. She doesn't have to ask a husband if she can go somewhere.

Item 2e. She's more than always concerned about me and my family. For money, leave kids with her. A lot of mothers don't help their married kids. Also my blind father.

Item 2f. Likes to argue. She's the type of person that if you say something she doesn't like she must tell you.

Item 2f. Can't say.

Item 2g. My girlfriend.

Item 2a. It used to be my grandmother, but I got older and saw that she wasn't the person I thought she was.

Item 2b. She seem like she understood people and was nice; all this changed later.

Item 2c. Aretha Franklin.

Item 2d. Her voice and money.

Item 2e. Nothing--she did do her best, but I don't admire her.

Item 2f. I wouldn't want to drink like she does.

Item 2g. No one--I'd probably talk to my husband. The last time I talked to a woman everything got mucked up.

Item 2g. My mother, she's the only woman I get advice from.

Plus Coding for Indicator 4

Item 3a. Make sure rent is paid; make sure we have money for food and clothes. Also be unselfish, and get little things I want, but don't need. My husband does a good job of it.

Item 3b. Make sure children are cleaned up, eat three meals, and go to school properly. Have sufficient clothing. Take to doctor; little things like that.

Item 3c. No.

Item 4. Really nothing. He can do everything I can do. He can sew, cook, shop. The house would be in good shape.

Item 5. If I get money I buy something, go shopping. Take in a movie; this is not very often because kids need something.

Minus Coding for Indicator 4

Item 3a. Take care of family, pay bills, do for his family.

Item 3b. She should take care of house, herself, kids and husband. Try to get along with husband.

Item 3c. Yes, some...I wouldn't have to be on aid, I can't stand to be on aid...wouldn't have all these burdens.

Item 4. He couldn't get along without me for nothing.

Item 5. Nothing (x). Nothing.

Item 3a. He should give respect to children, wife, and if he carry himself as the father they will follow him, otherwise they won't. His part is taking care of the family.

Item 3b. She should run the house, the children, do the household work.

Item 3c. Yes, some...helping with these children, in fact wherever a man is in the household the children are different in the family. They seem to do better.

Item 3a. Provider...the money to take care... both of us can, but I'd rather he should, I like that and help raise the kids.

Item 3b. I don't believe in women's lib, so I believe she should do just as much as the man.

Item 3c. Yes, some...he should take care of the kids too and cook sometimes.

Item 4. Nothing...He would take the kids to my mother and the house would be in a rage.

Item 5. On Saturday or Sunday nights I go out with the girls sometimes, fix my hair, make some clothes, take kids to mother's and I'm just alone in the house relaxing.

Item 3a. Taking care of the family; supporting and everything else.

Item 3b. Taking care of family; making ends meet, cooking, taking care of children.

Item 3c. Yes, some.

Item 4. They can't cook; they can clean, dress themselves, etc.

Item 5. I go out to a movie, sometime.

Item 4. Get up out of that bed, see to the small kids and dress them like I do; they wouldn't cook; just use cold cuts.

Item 5. Nothing, when I get through with my work I go in my room, turn the TV on and relax; sometimes I read.

Item 3a. He should be out making a living for his family. He should be concerned with help raising the children even though he does make a living for them.

Item 3b. To help raise the kids, keep her house clean, if she not working. A clean house can help make a man stay at home.

Item 3c. No.

Item 4. The house would be a mess; they wouldn't eat right. Everything else would go o.k.

Item 5. Nothing (x) I would like to go to the beauty parlor. Other than that I can't even imagine any free time to do anything without the children...sleep.

Plus Coding for Indicator 5

Item 7a. Be there when he eats, always be around because he's sickly. Take care of all of his physical needs. I would have to supervise his playing.

Item 7b. Teach him not to fight and teach him right from wrong. Teach him how to do housework and teach him how to start being independent.

Item 7c. He will be responsible for his own physical needs. I will have to sit down and talk to him about the things going on in the world, such as the groups of people he should or should not associate with.

Item 7d. If he's own his own I wouldn't tell him nothing. At that age make sure he respects my house, if he's living with me. And let him know I am still his mother.

Item 7e. I want him to bring his kids over to see me and sometimes on weekends let me keep them.

Minus Coding for Indicator 5

Item 7a. You should be home with the child and show her that you love her and teach her how to take care of herself.

Item 7b. They don't change too much, you still have to tell them what to do, when to do, and so on.

Item 7c. Mostly its about the same until they get about 15--you still have to tell them. After that age they should be able to think for themselves, but you still have to tell them what's right and wrong.

Item 7d. You can tell them, but they think they are grown then, but I still tell them and if they don't do it I think I have done my part because when they get that age all you can do is tell them.

Item 7e. I don't know about that; I'd tell her not to have no lot of kids.

Item 7a. Give him all the attention; make sure he's with me at least til five. I never let him be away from me; not even three days.

Item 7b. Probably let him get around more, visit more; go away for a few days.

Item 7a. Very important when child is small because he depends on you for everything--mamma, daddy, friend all in one. They need to feel secure, give them love, attention, confidence.

Item 7b. You can draw back their apron strings. They need more freedom, independence--important at that age.

Item 7c. If you haven't instilled any values at that age, it's almost too late. By that time--they get 18--it's over (your job). They just need you to advise them. They are pretty much on their own, but must meet my curfew in my house, but I let them think for themselves.

Item 7d. You know, you're their mother; same thing for 18 year olds if they are at home. I only say something when they get outrageous, cause they might have to come back home any time. I sit and more or less have a rap session--more talk than anything.

Item 7e. I'm going to try to be a grandma that don't tell them how to raise their children. I want to be an unmeddling grandmother. I don't want to keep them when I get tired--take them out of my sight.

Item 7c. I'll be the same.

Item 7d. Still act like a mother. By him being that old he'll probably have his own way of doing things.

Item 7e. He should act like a father--be there.

Item 7a. Try to take care of him and keep him from being sick.

Item 7b. The same--take care of him.

Item 7c. In a way. They have to change; they can't run their lives like they are babies.

Item 7d. Stay out of their business or putting their business in the streets.

Item 7e. Try to treat his child the same as I treated him.

Item 7a. Spend a lot of time teaching minor things. About parts of the body, washing faces. Home things: how to eat by themselves, clean themselves, go places. How not to run streets, ABC's, colors, tying shoelaces, etc.

Item 7b. Child personality is developing. You do more talking now, give more responsibilities. They can take care of themselves now--clothes, teeth. You teach them to get along with others, life, etc.

Item 7c. Supposing--a child's person is already here, you can't force a child this age. He is pretty much independent at this time. A mother can just be there. This is time when you're rewarded. If you were a good mother before then, this is the time you'll know. This is the time the generation gap comes in. You have to have patience then, to understand.

Item 7d. You have to let child live his own life. If he comes for advice you give and then you don't. If they ask for advice, guide but try to get them to make their own decisions. If out of home, especially.

Item 7e. Not too much of anything. If you've done most of the things right. If you've been good parents, they'll be a good parent. Find your life and let them also.

Plus Coding for Indicator 6

Item 8a. Trying to teach him to live in this world with all kinds of people. He has to know how to keep his self respect and what people will expect from him.

Item 8b. Just society--If you do what you're supposed to do you won't get in any trouble and maybe you will make it. You can do anything you want by getting yourself together and doing what you're supposed to do.

Item 8a. Just not to be bad. When he has kids he'll know how to treat them.

Item 8b. For him and his family.

Item 8a. For life in general, especially his teachers, voices of elderly people. He should listen to them, this is the way I was raised, to respect them.

Minus Coding for Indicator 6

Item 8a. I know that people like my pastor have rules so I spank her if she does something wrong because I know he wouldn't like it.

Item 8b. When I reward her I think about how my mother used to do me that way. Her father says I shouldn't discourage her so I try to encourage her to act a certain way for him.

Item 8a. For school for one thing. I don't want her in school acting a fool like other kids now and for friends because I wouldn't want anyone saying "I don't want that bad little girl at my house again."

Item 8b. For the outside world--how to get along with them and how to do without them.

Item 8a. Don't know, can't answer that one--Let's go on to something else.

Item 8b. For me and him.

Plus Coding for Indicator 7

Item 33. It's a blessing. It's the most beautiful gift in the world.

Item 34. It's something you should enjoy. It's like being all feminine. You are the one who can choose. You can be a mother, have a career. It's special and beautiful too.

Item 33. Best to wait until you're ready--being a mother takes a lot of your time so don't just have them when you are not mentally, financially (together) and all other ways. You give up a lot of freedoms forever.

Item 34. Should respect yourself and have set standards--goals in life and set off to reach them. Get a good education and prepare yourself for anything that life holds for you.

Item 33. Make sure she knows what she's doing--once she gets into it--motherhood is a bitch.

Item 34. The changes, it takes time to become a woman. Not every person out there is a woman. It's a rough thing being a woman.

Item 33. Tell her not to have more kids than you can handle. It's a job to try to raise a large

Minus Coding for Indicator 7

Item 33. She would have to find out for herself. I can't compare her with me--what I have gone through she may not have to.

Item 34. Always have protection against having more kids. Don't just keep on having kids. Try to have the kids and the man.

Item 33. Don't have a baby if she don't have someone to help her. If I couldn't help I'd send her to someone who could.

Item 34. I'd have to send her to somebody else or tell 'em don't grow up like I did with all these kids.

Item 33. I don't know--that depends...

Item 34. Take care of herself and watch out for these men.

Item 33. It's hard.

Item 34. It's hard.

Item 33. I don't know, they could probably tell me something.

Item 34. Go to school, graduate from high school, and get you a job.

family. Have one or two kids and forget about the rest of them.

Item 34. Have some pride about yourself. Don't throw yourself away. Don't give up your pride for three little words "I love you." Don't do what others are doing. Do what is right for you. You must respect yourself in order for men and other women to respect you. It's hard to be good and accepted, but it's worth it.

Item 33. It's nice to have kids, but you can't just have them without being a real mother.

Item 34. Be a good one and carry yourself the right way.

Personal Control (PC)

This variable is defined as the extent to which the mother believes that active, rather than passive, response to the interpersonal environment is most effective. This activity is evaluated only relative to educational settings. No attempt is made to determine the veracity of the beliefs expressed.

Please tell me whether you strongly agree, agree, don't know, disagree, or strongly disagree with each of the following statements:

1. If I disagree with the principal, there is very little I can do. ________
2. I can do very little to improve the schools. ________
3. Most children have to be made to learn. ________

4. Most teachers probably like quiet children better than active ones. ________

(01 Item 19a; 02 Item 20c)

Scores range for each item from 1=Strongly Agree to 5=Strongly Disagree. Total scores range from 20 to four; final scores are computed by dividing the number of items into the total score. The actual range of scores is from 5.0-1.0.

Value for School Achievement (VSA)

This variable is defined as the degree of the mother's emphasis upon educational achievement in the family. The measures of the variable include both her expressed aspirations for herself and her child, in addition to her actual past and present participation and involvement in the school setting.

Indicators	Questionnaire Items
(1) The mother herself finished high school at least, *versus* The mother did not finish high school.	Descriptive data.
(2) The mother hopes her child will finish college at least, and actually expects him to finish high school, *versus* The mother hopes her child will finish high school at least, but she does not actually expect him to.	How far in school would you like to see (child's name) go? (Item 11a) How far do you think (child's name) will actually go in school? (Item 11c) What is the *least* amount of schooling that you think he/she must have? (Item 11d)
(3) The mother reports belonging or having belonged to the local school PTA or other such	Do you belong to any local clubs or community groups such as the PTA or Tenants Advisory Council? (If "Yes,"

organization in the school system, versus The mother reports no participation in any school activities.	name them.) (Item 4a)
(4) The mother aspired herself to some profession which would (or did) take special training, versus The mother reports having no aspirations for training for special work.	About how much further in school would you have liked to have gone than you actually had a chance to go? (Item 8a). (Interviewer get mother's preferred level of school achievement, including degrees, etc., if possible.) What did you want to be? (Item 8c). Did you achieve what you wanted yet? Why or why not? (Item 8d). Do you have any educational plans for yourself now? (If "Yes," what sort of plans?) (Item 8e) If you had the chance to prepare in the next ten years for any occupation you would like, what occupation would you prepare for? (Item 8g) What is exciting to you about this occupation? (Item 8h)
(5) The mother emphasizes that she has told her child that school is a place to learn, versus The mother does not emphasize school as a place to learn.	What is different about the schools children go to now by comparison to when you went to elementary school? (Probe for differences, if relevant, in teacher behavior, materials available, parent's

(6) The mother regards this child as capable enough of a high level of school achievement since she regards him as being more intelligent and/or possibly more curious than other children,

versus

The mother does not see this child as being particularly more capable of school achievement than other children.

role, pupil composition, etc.) (Item 9a)

What do you think is most important for (child's name) to learn when he/she goes to school? (Item 10a)

Suppose (child's name) were to be going for his/her first day in kindergarten. What would you tell him/her to expect? (Item 14c)

Would you say that (child's name) is more, about the same, or somewhat less curious than his/her brothers and sisters were at the same age? (Interviewer, if the child is an only child, or the eldest child, ask mother about "other children in general.") (Item 13a)

More curious ( ) About the same ( ) Somewhat less ( )

Would you say that (child's name) is more, about the same, or somewhat less intelligent than his/her brothers and sisters at the same age? (Item 13b)

More intelligent ( ) About the same ( ) Somewhat less ( )

Comparing your child in general to other children his/her age in this community, would you say that he/she, (1) knows lots more words and concepts;

(2) knows about as many words and concepts as the other children; or (3) knows fewer words and concepts than other children? (Item 13c)

Knows lots more ( ) Knows about the same number ( ) knows fewer ( )

What about expressing him/herself when he/she talks? Does he/she (1) express him/herself much better than other children; (2) about the same as other children; (3) not quite as well as other children? (Item 13d)

Much better expression ( ) About the same ( ) Not as well ( )

Would you say he/she is, (1) very mature for his/her age; (2) about as mature as most children; (3) not as mature as most children? (Item 13e)

Very mature ( ) About the same ( ) Less mature ( )

Is he/she: (1) very attentive; (2) about average in ability to pay attention; (3) rarely likely to pay attention, and thus below average by comparison to other children? (Item 13f)

Very attentive ( ) Average in attention ( ) Below average ( )

(7) The mother gives some indication that she encourages her child in new learning--usually in terms of pleasure in the school related games and activities they participate in together, as well as in seeing a supportive role in his future success in school, versus

The mother does not particularly encourage her child towards learning which could be functional for him in the school situation.

Is she/he a child who: (1) almost never fights and argues; (2) sometimes fights and argues; (3) always fights and argues? (Item 13g)

What do you think he/she will need in order to get this far (in school)? (Item 11b)

Now we would like to learn your plans for (child's name) schooling. Do you plan to send him/her to nursery school and/or day care center before kindergarten? (Item 14a)

Yes ( ) Maybe ( ) Don't know ( ) No ( )

What educational value would this have for your child? (Item 14b)

How will you, as his/her mother have an influence on how well he/she does in school? (Item 14d)

What do you plan to teach (child's name) before he/she gets to kindergarten? For example, do you plan to teach him/her how to tell time, to count, to say the alphabet, etc.? (Item 15d)

What contact do you have with any of the local schools now? How often do you visit any of them? (Item 16a)

IF APPLICABLE: Why do you visit now? (Item 16b)

Where do you get your information about schools?

What do you think of the schools in your community?

(Item 16c)

Coding Addenda to VSA Scale by Indicators 1-7:

Indicator 1. Junior High is the tenth grade; only through 12th grade is acceptable for a plus (+) coding.

Indicator 2. Code minus (-) if mother does not think the child will finish high school.

Indicator 4. For a plus (+) coding, occupational aspirations expressed by the mother must require a professional degree, and mother must plan completion of at least junior college.

Indicator 5. See examples of plus and minus coding below. Code plus if mother emphasizes learning in school, as contrasted with merely how child is to behave.

Indicator 6. Code plus only if mother rates child More or About the Same on Items 13b-13f and Almost Never or Sometimes on Item 13g.

Indicator 7. See examples of plus and minus coding below. Code plus only if mother emphasizes the need for her support in 11b, that she plans to teach child in 15d, Yes or Maybe to 14d, and acquisition of new academic and personal-social skills in 14b. Code plus if mother has an unusually close contact with schools now (e.g., teacher's aide), even if a minus would be recorded to any of the above responses. Check Items 16a-16c for this assessment.

Plus Coding for Indicator 5

Item 9a. I don't think students and teachers have much of an understanding nowadays--when we were in school we were closer--when I was growing up, parents would take teacher's side--now they are ready to fight with teachers--don't seem interested in finding out about child--

Item 10a. Math, science, English (all academic) work)--social things are important but academics most.

Item 14c. About the same as daycare--they would learn more.

Item 9a. There are more schools than we had and they have more opportunity to learn than we had.

Item 10a. Get a good education so they can get a good job. (x) Good education--means a lot of things· you can read a contract and see that you won't get gyped, you can get a good job, and if you get a house you'll know more about the quality.

Minus Coding for Indicator 5

Item 9a. Discipline. They have no discipline. (x) Basically that's it, if they get that part settled the rest just sort of falls in line.

Item 10a. Everything that they teach.

Item 14c. A brand new experience.

Item 9a. We didn't get all those recesses and we were all in one room. The kids are much wiser, but they do more mischievous things. The teachers are easier on kids than they were when I was in school.

Item 10a. Arithmetic, spelling, and writing, and to be able to speak correctly.

Item 14c. I'd tell her she was going to school today and to be a nice girl in school. I'd tell her to tell the teacher her name.

Item 14c. Crying from other kids, maybe it'll be different from other days because he won't be used to it. Obey the teacher.

Plus Coding for Indicator 7

Item 11b. Money; a will to go to school.

Item 14a. Yes

Item 14b. They taught him his ABC's--colors, animals; he's the youngest and gave him a chance with older children; he learned how to paint, draw pictures; also he tries to do what the other children do; he pays attention more.

Item 14d. I can help him with his homework and try to keep him out of trouble; try to get him to really understand his work so that he will like it more.

Item 15d. To count, tie his shoes, put his own clothes on, alphabet.

Item 16a. Chicago Loop College--going to school there; local high school--to take A. there.

Item 16b. Going back to school and child attends local high school for daycare.

Item 16c. From other people.

Minus Coding for Indicator 7

Item 11b. She'll need everybody to take an interest in her and encouragement.

Item 14a. Yes.

Item 14b. They'd help her to read, because she's already easy to catch on.

Item 14d. I'd expose her to a lot of things (no other response)--Kids learn many things when you take them places with you.

Item 15d. How to count, spell and print her ABC's.

Item 16a. None.

Item 16b. ----

Item 16c. From the project (Family Development Program). They're nice as far as I know.

Item 11b. Determination, incentive, and willingness to learn.

Item 14a. Yes.

Item 14b. It can help her a great deal. It will start the learning process.

Item 14d. I hope I have a positive influence. The fact that she sees me with my books studying so hard, perhaps she'll want to get into the books.

Item 15d. Her ABC's, her numbers, and how to write her name.

Item 16a. Very little.

Item 16b. Usually to find out something about my children.

Item 16c. Children tell me some, other parents in the area. They need improvement.

Item 11b. Somebody to keep telling her to go.

Item 14a. Yes.

Item 14b. She'll probably be around a lot of kids, and she'll be more friendly with the kids and know what to expect when she goes to school.

Item 14d. I'd probably sit in for an hour or so to see how she's doing.

Item 15d. To be courteous, play with the kids, don't be fighting, obey the teacher.

Item 16a. None.

Item 16b. ----

Item 16c. From the school I attend. I think they could be better (x). In the summer when school lets out you see a lot of broken windows.

Appendix B

Item Stems from Loevinger Sentence Completion Test Coded for Present Study

Item	Stem
1.	Raising a family__________
2.	Most men think that women__________
3.	When they avoid me__________
4.	If my mother__________
7.	My mother and I__________
9.	Education__________
11.	Women are lucky because__________
12.	My father__________
13.	A pregnant woman__________
15.	A wife should__________
18.	A woman's body__________
19.	When a child won't join in group activities__________
21.	When they talk about sex, I__________
24.	A woman feels good when__________
28.	A good mother__________
31.	When she thought of her mother, she__________
32.	If I can't get what I want__________
34.	My conscience bothers me if__________

Appendix C

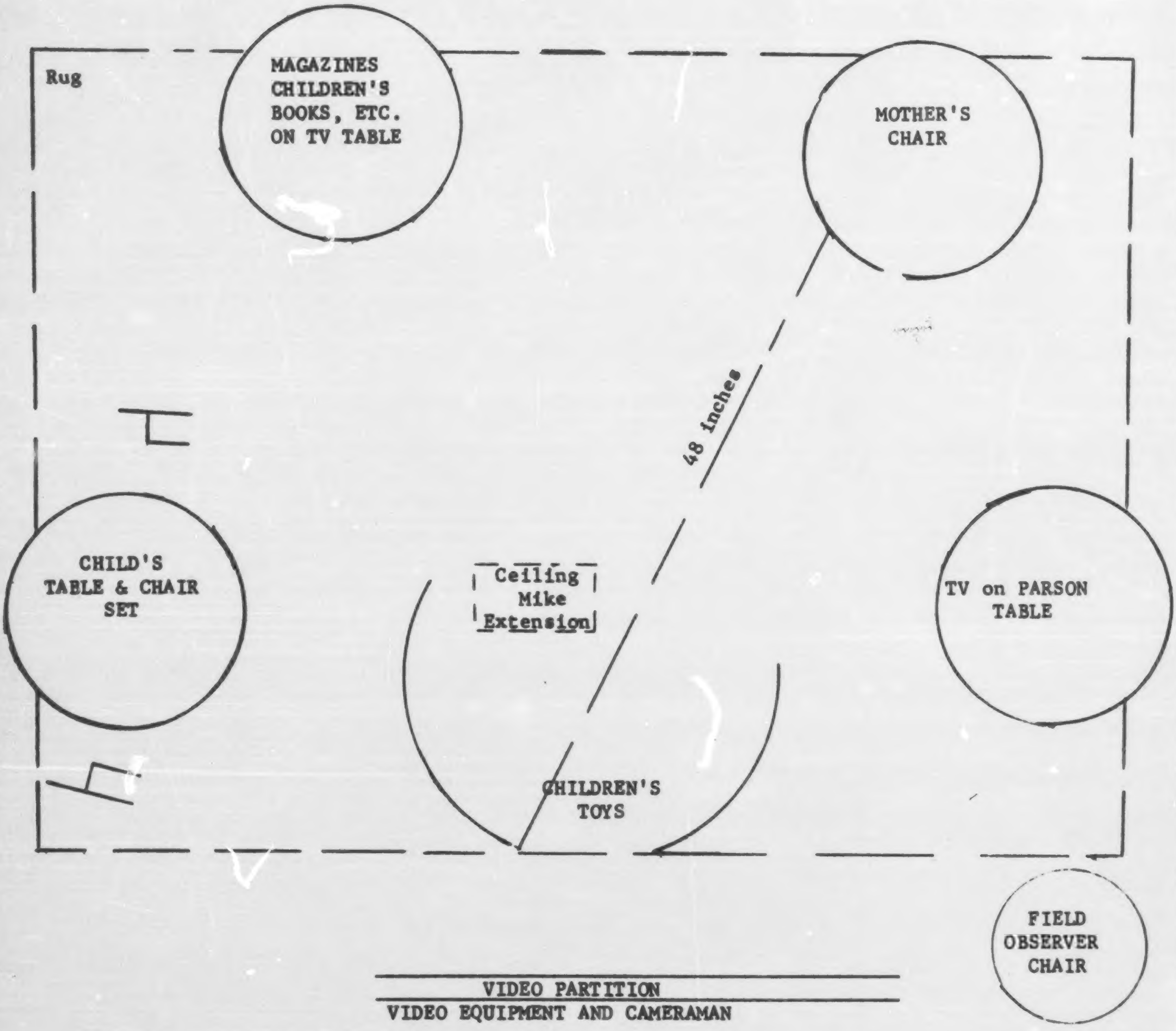
Listing of Toys Used at Times 1 and 2

1. adult personal items**
2. can
3. chair
4. child's book
5. coaster
6. coaster blocks
7. coaster horn
8. coaster stick
9. coaster wheel
10. doll
11. doll hair
12. doll string
13. letterboard*
14. lid (to can)
15. magazine
16. mailbox
17. mailbox blocks
18. mailbox strings
19. playschool blocks
20. playschool sticks
21. postcard
22. puppet*
23. puzzle*
24. radio knob
25. radio-purse like (music box)
26. table
27. telephone
28. telephone dial
29. television
30. television knob
31. tricycle
32. trucks
33. xylophone
34. xylophone hammer

*Used only at Time 2.

**For example, cigarettes, ashtray, pieces of food, etc.

Sketch of Observation Room


Rug
MAGAZINES CHILDREN'S BOOKS, ETC. ON TV TABLE
MOTHER'S CHAIR
48 inches
CHILD'S TABLE & CHAIR SET
Ceiling Mike Extension
TV on PARSON TABLE
CHILDREN'S TOYS
FIELD OBSERVER CHAIR
VIDEO PARTITION
VIDEO EQUIPMENT AND CAMERAMAN

NOTE PLACEMENT OF TOYS:

Place doll on chair
Place puppet on table along with puzzle
Place magnetic board on table and attach letters on board inside plastic bag

*Toys should be placed on an arc, the center of which is 48 inches
from the mother's chair.

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[1] United Charities program staff initially sought participants beyond those required for the research because of a concern about potential attrition.

[2] The retained control child (site A) was not tested; however, this family also attrited, for a total N=49 on attrition.

[3] The rating scale for comfort during the observation session was developed by Schaefer using selected questions from the post-observation interview. It was reasoned that the extent to which the mother's perceptions of the session diverged markedly from its actual goals, the more likely she would be uncomfortable, and possibly communicate this discomfort to her child. Schaefer had been a field observer and several post-observation questions seemed to her to be most revealing. They include: (a) What, in general, is your best understanding of the purposes of this observation? (b) When you were doing (specific identified mother initiated behavior), what were you trying to do? Why? What were you experiencing? (c) What did you do that is different than what you usually do at home when your child is in the room with you? (d) Would you say you acted very much like, pretty much like, or not at all like you do as compared with at home? (e) Would you say you were more shy, more outgoing, or about the same as you are at home? Generally, if the emphases were on "testing" the child, or the mother and child, behaving not at all like at home, pressing the child to perform in a manner which

would, typically, not be done at home, etc., high discomfort was noted, and the scores on this scale would be low. Across all nine observation cells at times 1,2 the mean scores range from 12.6-15.2 (median=14.3). Scores actually range from 9-18; the maximum possible range is 5-21. Copies of this scale (as well as others) and more details about its psychometric properties are available from the author c/o 2003 Sheridan Road, Evanston, Illinois, 60201.

[4] An inventory of Stress on the Home Environment was developed for this study and included in these analyses. Eleven potentially objective "stressors" (e.g., starting, stopping work or changing jobs; death of a close friend or relative; serious illness of self or a close relation or friend) were identified. Respondents' scores at times 1 and 2 are based upon reports of their apparent presence (=1) or absence (=0) during that particular year. When time 1 scores are covaried, controls do not differ significantly from others on this index. Subsequent item analyses indicate a test reliability coefficient of .67 for the 11 items. Factor and latent trait analyses were performed. The scale consists of one strong factor which accounts for 29% of the item variance, and which clearly contains 8 of the 11 items (factor loadings=.42-.93). Item chi squares are not significant, indicating that items are a good fit to the underlying "trait" being measured, i.e. stress.

[5] Whether or not the MI scale merely reflects social desirability is immaterial since it does correlate with independent evaluations of children's achievements. In short, it has predictive, if not construct, validity.

[6] Interestingly, a similar interpretation is offered by Harkness (1979) in a discussion of the use of the Kohlberg scale of moral development with men in a traditional rural Kenyan community. She argues that stages four through six are not evident for this population because they are peculiarly Western:

> There is no need to distinguish between the authority of principles and the authority of persons, since an elder who ceases to represent the values of the community will immediately lose his status as an

> elder. In dispute settlement cases which are arbitrated by community elders, the goal is not to vindicate the rights of the individual but rather to reestablish social equilibrium among people who will continue to associate daily and to rely on each other for their well-being. Stage three on the Kohlberg scale, which emphasizes interpersonal concordance, is a valid representation of the values of this kind of community, and in fact stage three reasoning was favored by the elders of the community we studied. Thus, although stages of moral reasoning may follow upon one another in a given sequence, as Kohlberg suggested, the cultural universality may consist of only the first three stages.

The point is, the meanings of any particular stage location must be interpreted from a sociocultural, as well an intraindividual, perspective.

[7] Results virtually identical to those found when complete data samples (*Ns*=57,58) are used are, with one important exception, also found when all data collected at a given time period are analyzed (means, standard deviations). There is a five point discrepancy between the average of the Discussion group complete data sample on the McCarthy GCI (*M*=105.6, *SD*=14.0, *N*=15) and that of the total Discussion group sample tested (*M*=100.8, *SD*=18.2, *N*=19) at that time period. While this difference is nonsignificant, *possibly* the significance between the MD and control groups at time 3 would not have been obtained had the additional four cases been in the sample. There is a mean difference of 9 points in the complete data samples between the two groups, MD and control, but a difference of 5 points between the two when all tested subjects in both groups are used. The differences between TD and control groups in both such instances remain constant at about 7 points. The most parsimonious interpretation of these data is that the rank order of results on the McCarthy is: TD=1, MD=2, control=3

with TD children clearly, and MD children probably, being significantly superior to control children on this instrument.

[8] If there have been few formulations which permit testable hypotheses about linkages between social and personal systems, even fewer relate adult personality processes to parenting attitudes and behaviors. The majority of the researches in this area have either at best used contrast groups such as studies of the parenting attitudes of preidentified normal versus schizophrenic women who are mothers (Cohler, 1970), or at worst inferred personality processes and states from expressed attitudes about childrearing (Sears, Maccoby, & Levin, 1959). Other earlier studies have primarily attempted construct validation of existing parental attitude scales (Becker & Krug, 1959). The findings of these studies are almost uniformly predictable: rejecting parental attitudes are correlated with less adequate personal functioning. While informative, these approaches do not illuminate theoretical linkages between adult personality and parental attitudes and behaviors, nor more importantly, linkages between these constructs and the social structure.

[9] The recently reported findings of Zelkowitz (1979) partially support this interpretation. Low income black and white mothers (N=40), despite the frequency of their social contacts with relatives and friends, are more stressed/depressed if they believe they do not have a close confidant. Zelkowitz related a subjective "stress" score to observed parenting styles in the home. Stressed mothers are less nurturant and more domineering with their children.

Table 1

Summary of Sample Distribution by Site, Program, and Zone

Site		Correct zone	Incorrect zone	Totals
Altgeld	TD[a]	13	2	15
	MD[b]	18	4	22
	C[c]	11	0	11
Robert Taylor	TD	12	4	16
	MD	15	1	16
	C	13	1	14
Henry Horner	TD	4	6	10
	MD	14	1	15
	C	12	1	13
Totals	TD	29	12	41
	MD	47	6	53
	C	36	2	38
				132

[a] TD=Toy Demonstration group

[b] MD=Mothers Discussion group

[c] C=control group

Table 2

Comparative Social Background Data on Sample by Program Group and Site

Variable	Toy Demonstration				Mothers Discussion				Control			
Site	A	B	C	TOT	A	B	C	TOT	A	B	C	TOT
(n)	(9)	(10)	(7)	(26)	(11)	(9)	(6)	(26)	(7)	(13)	(11)	(31)
A. Child Sex:												
Male/Female	3/6	5/5	4/3	12/14	4/7	4/5	2/4	10/16	2/5	7/6	5/6	14/17
B. Income (%)												
Primary family income= ADFC	66.7	100.0	100.0	88.5	90.9	100.0	100.0	96.0	85.7	100.0	90.9	93.3
No secondary income reported	100.0	50.0	100.0	80.8	100.0	100.0	83.3	96.0	100.0	66.7	90.9	83.3
C. Occupation (%)												
No current work	87.5	100.0	85.7	92.0	100.0	100.0	100.0	100.0	100.0	100.0	90.9	96.8
No past work prior to child's birth	25.0	20.0	14.3	20.0	45.5	37.5	33.3	40.0	57.1	33.3	45.5	43.3

Previous full-time work experience		12.5	50.0	42.9	36.0	9.1	50.0	80.0	37.5	14.3	38.5	11.1	24.1
D. Maternal Education	M	11.8	10.8	10.3	11.0	11.4	9.9	10.3	10.6	10.6	10.3	10.6	10.5
	SD	1.30	1.75	1.89	1.70	1.12	1.46	0.82	1.32	2.44	1.70	1.36	1.73
E. Family Composition													
Household size	M	5.0	6.4	7.3	6.2	4.6	6.8	6.7	5.8	5.9	7.8	8.1	7.5
	SD	2.00	2.01	1.98	2.13	1.69	2.49	3.93	2.71	1.68	2.12	3.70	2.78
Number of children in household--excluding program child	M	1.8	2.5	4.7	2.8	2.4	3.6	2.7	2.8	2.7	3.7	5.0	3.9
	SD	2.05	1.58	2.06	2.17	1.50	2.56	2.73	2.17	0.95	1.55	3.26	2.34
Child birth order	M	1.9	2.5	5.3	3.0	2.8	4.9	3.8	3.7	3.0	2.5	3.9	3.1
	SD	1.36	1.84	3.27	2.46	1.72	3.89	4.54	3.24	2.00	2.11	2.88	2.39
Never apart from child more than one week (%)		55.6	80.0	57.1	65.4	50.0	71.4	100.0	69.6	57.1	69.2	90.0	73.3

No adult male in household (over age 16-%)	33.3	20.0	28.6	26.9	63.6	25.0	50.0	48.0	28.6	15.4	72.7	38.7
Only one adult female in household (over age 16-%)	77.8	40.0	28.6	50.0	90.9	25.0	66.7	64.0	71.4	7.7	45.5	35.5
Simple nuclear family (%)	22.2	50.0	14.3	30.8	36.4	25.0	33.3	32.0	14.3	7.7	0.0	6.5
Attenuated nuclear family (%)	55.6	0.0	57.1	34.6	54.5	62.5	66.7	60.0	57.1	30.0	72.7	51.6
Simple extended family (%)	0.0	10.0	0.0	3.8	9.1	0.0	0.0	4.0	0.0	0.0	0.0	0.0
Attenuated extended family (%)	22.2	40.0	28.2	30.8	0.0	12.5	0.0	4.0	28.6	61.5	27.3	41.9
Sustain contact with child's natural father (%)	77.8	80.0	85.7	80.8	72.7	42.9	50.0	58.3	28.6	53.8	9.1	32.3

Father, lives with child (%)		22.2	60.6	14.3	34.7	45.5	28.6	33.3	37.5	14.3	7.7	9.1	6.6
Father, does not live with child (%)		44.4	10.0	71.4	38.5	36.4	14.3	16.7	25.0	14.3	53.8	0.0	25.8
Other male, does not live with child (%)		11.1	10.0	0.0	7.7	9.1	42.9	16.7	20.8	0.0	38.5	54.5	35.5
Other male, lives with child (%)		0.0	10.0	0.0	3.8	9.1	0.0	0.0	4.2	42.9	0.0	18.2	16.0
No information (%)		11.1	10.0	14.3	15.3	0.0	14.3	33.3	12.5	28.6	0.0	18.2	16.0
F. Health status													
Child	M	2.1	2.3	2.3	2.2	2.9	2.7	1.6	2.5	1.7	1.5	3.4	2.2
	SD	1.61	2.21	1.98	1.88	1.92	1.80	0.82	1.96	1.25	1.51	1.69	1.71
Mother	M	1.8	1.8	2.0	1.9	2.0	2.0	1.7	1.8	2.1	1.8	2.2	2.0
	SD	0.46	0.63	0.58	0.18	0.54	0.00	0.52	0.55	0.69	0.80	0.42	0.67
G. Age													
Child at 10/15/74 (months)	M	20.4	20.0	19.7	20.1	20.5	20.8	21.3	21.0	21.3	19.2	20.9	20.3
	SD	2.70	2.31	2.56	2.43	2.98	2.11	1.63	2.19	1.60	1.83	2.07	2.04

Mother at 7/1/75	M	24.6	22.8	27.8	24.8	22.6	34.4	24.8	26.9	25.0	22.4	24.4	23.7
(Years)	SD	9.07	5.77	8.55	7.75	2.87	10.95	7.76	8.89	7.37	6.42	6.41	6.51

Table 3

Summary of Major Study Variables, Measures, Procedures, and Predicted Outcomes

Variables	Method of Measurement	Frequency	Dates	Location	Expected Outcome at Study Conclusion
1. Intellectual Development Of Child	1. Cattell Infant Scales	2	9/23/74-2/15/75; 7/23-9/18/75	Site	TD, MD > C (by time 2)
	2. Peabody Picture Vocabulary Test	3	9/23/74-2/15/75; 7/23-9/18/75; 5/6-6/30/76	Site	TD, MD > C
	3. McCarthy Scales of Mental Ability	1	5/6-6/30/76	Site	TD, MD > C
2. Personal-Subjective Interactive Maternal Teaching Style	Videotape Observation: Summated frequency counts at 10-second intervals over 108 10-second units (18 minutes) per categories a.-i.	2	11/8-12/13/74 and 2/27-5/9/75; 3/10-6/18/76	Site	
a. Restrictive					a. TD, MD < C
b. Redirective					b. TD, MD < C
c. Suggestive					c. TD, MD < C
d. Directive					d. TD, MD < C
e. Supportive					e. TD, MD > C
f. Expansive					f. TD, MD > C
g. Instructive					g. TD, MD > C
h. Interactive					h. TD, MD > C
i. No Theme					i. TD, MD < C

3. Child Free-Choice Behavior	Videotape Observation: Summated frequency counts at 10-second intervals over 108 10-second units (18 minutes) per categories 3, 4, 6, 7 8a and b, and 5a.	2	11/8-12/13/74 and 2/27-5/9/75; 3/10-6/18/76	Site	
a. Imitation					3a. TD, MD > C
b. Representation					3b. TD, MD > C
4. Child Interest in Novelty		2	11/8-12/13/74 and 2/27-5/9/75	Site	
a. Object Uses-Verbal					4a. TD, MD > C
b. Object Uses-Nonverbal					4b. TD, MD > C
5. Child Attention Span		2	"	Site	
a. Transition					5a. TD, MD < C
6. Child Verbal Expressiveness		2	"	Site	
a. Object Uses-Verbal					6a. TD, MD > C
b. Groups-Verbal					6b. TD, MD > C
7. Child Grouping[a]		2	"	Site	
a. Groups-Verbal					7a. TD, MD > C
b. Groups-Nonverbal					7b. ?

8.	Child Non Play[b]		2	"	Site	
	a. Social Contact					8a. ?
	b. Discrepant					8b. ?
9.	Maternal Individuation	Interview Rating of Maternal Report Re: Childrearing	2	5/14-7/14/75 5/20-7/22/76	Home Home	TD, MD>C
10.	Developmental Explanations for Child Behaviors	Interview Rating of Maternal Report Re: Childrearing	2	5/14-7/14/75; 5/20-7/22/76	Home	TD, MD>C
11.	Teaching Perspectives	Interview Rating of Maternal Report Re: Childrearing	2	5/14-7/14/75; 5/20-7/22/76	Home	TD, MD>C
12.	Maternal Ego Development and Esteem	Loevinger Scale of Ego Development	2	5/14-7/14/75; 5/20-7/22/76	Home	TD, MD>C
		Interview Rating of Esteem	1	5/20-7/22/76	Home	TD, MD>C
		Personal Control Scale	2	5/14-7/14/75; 5/20-7/22/76	Home	TD, MD>C
13.	Maternal Expressed Values					
	a. Traditionalism versus modernity as Preferred Life Style	Forced Choice Inventory of Expressed Values[c]	1	5/20-7/22/76	Home	TD, MD>C

b. Value for School Achievement	Interview Rating	1	5/14-7/14/75	Home	TD =MD= C

[a,b] Variables identified during the study.

[c] Developed for this study.

Table 4

Peabody Picture Vocabulary IQ Scores by Group,

Site and Time of Assessment

(Time)	Toy Demonstration				Mothers Discussion				Control			
	Site A	Site B	Site C	Total	Site A	Site B	Site C	Total	Site A	Site B	Site C	Total
(1)												
M	98.1	104.8	104.0	102.0*	100.7	97.0	109.0	101.9*	94.7	101.8	88.8	94.4*
SD	9.43	5.97	25.5	12.60	12.05	2.45	6.63	9.74	8.69	9.11	13.40	11.78
n	(8)	(8)	(4)	(20)	(7)	(4)	(4)	(15)	(6)	(6)	(8)	(20)
(2)												
M	97.9	88.0	85.3	91.4*	95.0	87.8	90.0	91.7*	86.8	85.8	80.4	84.0*
SD	11.62	10.66	5.74	11.28	13.50	7.46	17.80	12.99	7.55	7.36	9.38	8.41
n	(8)	(8)	(4)	(20)	(7)	(4)	(4)	(15)	(6)	(6)	(8)	(20)
(3)												
M	83.8	68.1	78.7	76.5	79.4	74.0	76.5	77.2	81.8	73.2	70.2	74.6
SD	8.68	7.20	3.86	10.10	4.39	7.07	13.03	7.80	2.79	10.50	7.63	8.81
n	(8)	(8)	(4)	(20)	(7)	(4)	(4)	(15)	(6)	(6)	(8)	(20)

$^{*}p \leq .05$.

Table 5

Cattell Infant and McCarthy IQ Scores by Group, Site and Time of Assessment

(Time)	Toy Demonstration				Mothers Discussion				Control			
	Site A	Site B	Site C	Total	Site A	Site B	Site C	Total	Site A	Site B	Site C	Total
(1) Cattell												
M	108.4	120.0	114.8	114.3	109.9	113.0	110.7	110.9	103.0	117.9	106.0	109.7
SD	10.73	10.45	21.40	14.00	12.40	6.98	3.79	9.55	4.98	11.33	10.86	11.47
n	(8)	(8)	(5)	(21)	(8)	(4)	(3)	(15)	(6)	(8)	(7)	(21)
(2) Cattell												
M	114.1	108.3	104.4	109.6*	104.0	103.3	105.0	104.0	103.3	101.6	101.4	102.0*
SD	13.13	7.25	7.20	10.23	13.52	7.41	8.19	10.64	14.77	8.48	11.55	10.98
n	(8)	(8)	(5)	(21)	(8)	(4)	(3)	(15)	(6)	(8)	(7)	(21)
(3) McCarthy												
M	107.9	95.4	112.2	104.1*	104.4	108.8	104.7	105.6*	95.7	100.3	92.8	96.5*
SD	12.07	10.77	9.68	12.76	17.22	14.13	3.21	14.01	13.26	10.93	12.81	12.06
n	(8)	(8)	(5)	(21)	(8)	(4)	(3)	(15)	(6)	(8)	(7)	(21)

$^*p \leq .05$.

Table 6

Summary Table Of Multivariate Analyses Of Variance For Time One Maternal Teaching Style And Observed Child Play Structure

Source	df	F - Ratio Maternal Teaching Style[a]	 Child Play Structure[b]
Groups	12,108	<1	<1
Sites	12,108	1.62	1.70
Groups X Sites	24,189.6	1.15	1.46

[a] Variables used were designated Interacting, Redirecting, Supporting, Expanding, Instruction and No Theme.

[b] Variables used were Object Use, Verbal; Object Use, Non-Verbal; Grouping Verbal; Grouping Non-Verbal; Imitation; and Transition.

Table 7

Summary Table of Multivariate And Univariate
Analyses of Covariance For Time Two Observation Data
Using Time One Measures As Covariates

A. Multivariate Analyses

Source	df	Maternal Teaching	Child Play Structures
Groups	12,96	2.90**	2.93**
Sites	12,96	1.49	<1
Groups X Sites	24,168.7	1.31	1.51

B. Univariate Analyses F-ratios

Variable	Groups (df=2,53)	Sites (df=2,53)	Groups X Sites (df=4,53)
1. Maternal Teaching Styles			
Interacting	6.92**	2.15	2.42
Redirecting	2.08	<1	1.42
Supporting	1.07	<1	1.99
Expanding	4.79**	<1	<1
Instructing	2.52	1.00	<1
No Theme	1.63	<1	1.22
2. Child Play Structures			
Object Use-Nonverbal	4.33*	1.06	1.40
Object Use-Verbal	3.47*	<1	3.78**
Grouping-Nonverbal	1.85	<1	1.08
Grouping-Verbal	2.66	<1	1.34
Imitation	<1	<1	3.16*
Transition	<1	<1	1.71

*$p < .05$

**$p < .01$.

Table 8

Observed Means and Standard Deviations of Dependent Variables By Group-Maternal Teaching Style

Variable	Mothers Discussion (*n*=21)		Toy Demonstration (*n*=19)		Control (*n*=28)	
	M	*SD*	*M*	*SD*	*M*	*SD*
(1) Inter 1	4.109	0.833	4.059	0.820	3.923	1.104
(2) Inter 2	4.198	0.519	3.475	1.312	2.744	1.864
(3) Restr 1	0.516	0.811	0.424	0.848	0.232[c]	0.524
(4) Restr 2	0.376	0.664	0.036[a,c]	0.159	0.392[a,c]	0.208
(5) Redir 1	1.918	0.903	1.734	0.916	1.708	1.181
(6) Redir 2	1.707	0.914	1.063	0.991	1.145	1.129
(7) Dirct 1	0.508	0.694	0.702	0.962	0.983	1.183
(8) Dirct 2	0.310	0.604	0.278	0.625	0.173[a]	0.553
(9) Suggs 1	0.576	0.849	0.671	0.987	0.810	0.963
(10) Suggs 2	0.303[c]	0.559	0.121[a,c]	0.528	0.039[a,c]	0.208
(11) Suprt 1	3.785	0.497	3.702	0.530	3.747	0.591
(12) Suprt 2	3.782	0.484	3.320	1.269	3.407	1.289
(13) Expan 1	1.669	1.135	1.425	1.140	1.437	0.956
(14) Expan 2	1.954	1.229	0.968	1.486	0.758	1.114
(15) Instr 1	1.422	1.422	1.569	1.289	1.599	1.094
(16) Instr 2	1.761	1.290	1.051	1.235	0.856	1.257
(17) Nothm 1	2.004	1.667	2.428	1.580	2.204	1.668
(18) Nothm 2	1.979	1.664	2.838	1.925	2.861	1.612

Note. Variables with zero occurence in any of the nine cells were deleted from analyses of variance procedures.

[a] zero occurrence at Site A

[b] zero occurrence at Site B

[c] zero occurrence at Site C

Table 9

Observed Means and Standard Deviations Of Dependent Variables By Group-Child Play Structures

	Mothers Discussion (n=21)		Toy Demonstration (n=19)		Control (n=28)	
Variable	M	SD	M	SD	M	SD
(1) Discr 1	0.440[b]	0.898	0.898	1.314	0.538	1.055
(2) Discr 2	0.390[c]	1.093	0.175[c]	0.617	0.248[a,b]	0.131
(3) Trans 1	1.375	1.008	1.519	1.089	1.810	0.821
(4) Trans 2	1.072	0.875	1.290	0.895	1.240	0.998
(5) SoCon 1	0.376	0.790	0.351	0.736	0.386	0.773
(6) SoCon 2	0.143[a]	0.517	0.371	0.768	0.050[a,c]	0.262
(7) ObjNv 1	3.596	0.552	3.257	0.926	3.398	0.742
(8) ObjNv 2	3.002	0.781	3.672	0.533	3.018	1.192
(9) Obj V 1	2.469	1.117	2.435	1.449	2.126	1.275
(10) Obj V 2	2.813	1.098	2.115	1.205	1.927	1.486
(11) Grp Nv 1	2.361	1.229	2.153	1.354	2.308	1.236
(12) Grp Nv 2	2.408	1.033	2.360	1.230	2.884	1.082
(13) Grp V 1	1.537	1.354	1.599	1.248	1.286	1.287
(14) Grp V 2	2.597	1.239	1.856	1.374	1.721	1.622
(15) Imit 1	1.424	1.240	1.808	0.962	1.965	1.242
(16) Imit 2	1.147	1.104	1.675	1.336	1.536	1.246
(17) Repre 1	0.395[c]	0.676	0.736[c]	1.181	0.526	1.130
(18) Repre 2	0.694	1.213	0.655	1.018	0.633	1.090

Note. Variables with zero occurrence in any of the nine cells were deleted.

[a] zero occurrence at Site A

[b] zero occurrence at Site B

[c] zero occurrence at Site C

Table 10

Summary Table of Multivariate and Univariate Analyses of Covariance for Time Two Interview Data Using Time One Measures As Covariates

A. Multivariate Analyses

Source	df	Attitudes and Personality Processes
Groups	12,94	1.53*

B. Univariate Analyses F-ratios

	Groups (df)=2,52)
Maternal Individuation	< 1
Developmental Explanations	1.28
Teaching Perspectives	< 1
Personal Control	< 1
Ego Development	7.65**
Stress on the Home Environment (Perceived)	< 1

*$p = .13$

**$p < .001$

Table 11

Breakdown of Loevinger 2 Score by Group and Housing Site

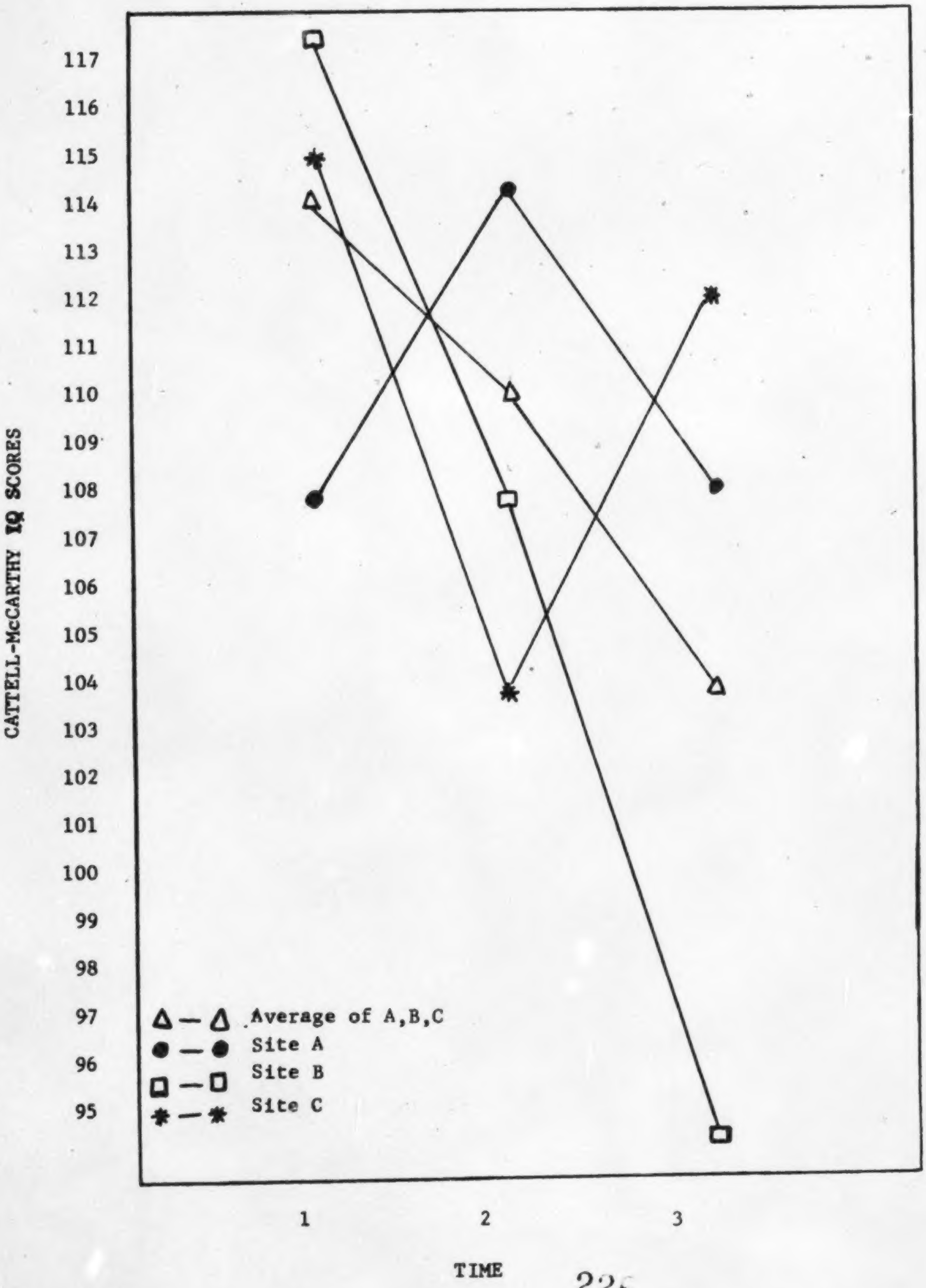
		Group			
		Toy Demonstration	Mothers Discussion	Control	Site Totals
Site A	*M*	4.00	4.33	2.50	3.61*
	SD	1.41	1.22	1.52	1.24
	n	4	9	6	19
Site B	*M*	2.30	3.00	2.30	2.53*
	SD	0.95	1.93	1.49	1.43
	n	10	8	10	28
Site C	*M*	3.17	2.33	2.12	2.54*
	SD	1.47	1.16	0.83	1.30
	n	6	3	8	17
Group Totals	*M*	2.90	3.50*	2.29*	2.89
	SD	1.33	1.67	1.27	1.47
	n	20	20	24	64

$^*p \leq .05$.

Figure Caption

Figure 1. Profile of TD mean IQ scores over time by sites A, B, and C.

Figure 2. Profile of MD mean IQ scores over time by sites A, B, and C.


CATTELL-McCARTHY IQ SCORES
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100
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98
97
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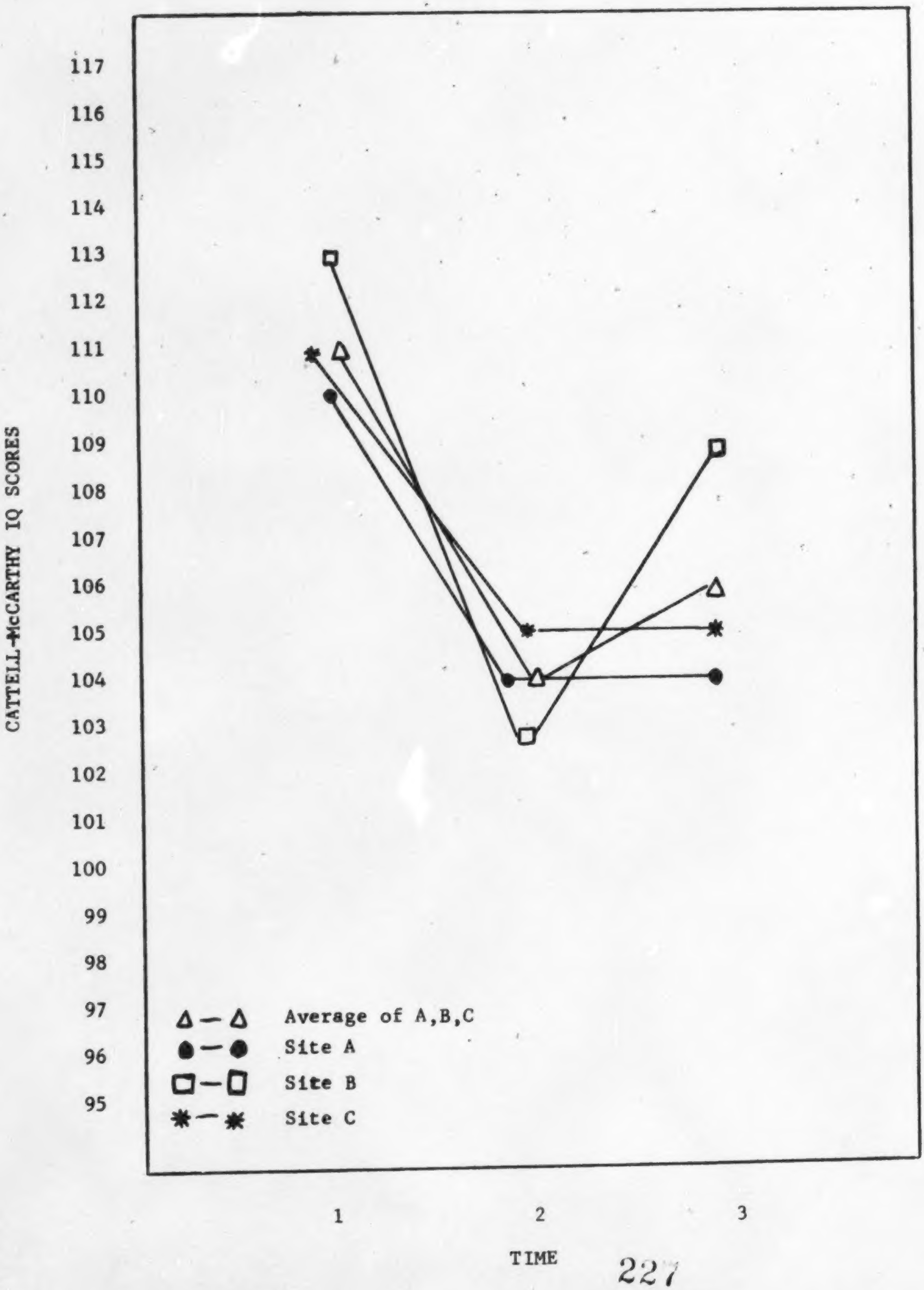
95
Δ — Δ Average of A,B,C
● — ● Site A
□ — □ Site B
✱ — ✱ Site C
1
2
3
TIME


CATTELL-McCARTHY IQ SCORES
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96
95
△ — △ Average of A,B,C
● — ● Site A
□ — □ Site B
✱ — ✱ Site C
1
2
3
TIME